Redefining the Economy:

How the ‘economy’ was invented in 1620, and has been redefined ever since

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Abstract

Gross domestic product has long been criticised as a poor indicator of economic growth. In this thesis I argue that any proposed alternative for GDP cannot effect change, because GDP is not an indicator. Instead GDP is our definition of the economy, which I argue by presenting the history of how we have measured the economy through national accounts. GDP, it turns out, is simply the most recent consensus definition of what the economy is. So this is the history of how we have defined, measured and redefined the economy since its invention in the 1620s.

Using primary sources I argue that the supposedly mercantilist definition of the economy was never policy relevant in the 17th century. The 18th century saw an active empirical debate and the economy was defined by Davenant's civil service, Walpole's Treasury accounts, and eventually scholars, who displaced secular policy advisors in the 1770s. Adam Smith defined an economy that dominated Britain for a century, but he adopted Physiocratic ideas which were rejected by the French government's own economists.

British government offices continued to do empirical work in the 19th century and produced the 'official' statistics used for policy making. Marshall and then Keynes would use these offices to redefine the economy. Keynes convinced Meade, Stone and HM Treasury to redefine the economy and his idea displaced the official American definition, despite loud protestations from Kuznets. So this is a history which tries to challenge our view of the economy, by showing how we have redefined it in the past and indicates how we could do it again.

Abbreviations

In-text references:

Anon.	Anonymous
BEA	Bureau of Economic Analysis[1] (USA)
CSO	Central Statistical Office (UK)
CD	*Commons Debates 1621* (Notestein et al. 1937)
GDP	Gross Domestic Product
GNP	Gross National Product
HoC	House of Commons, History and Proceedings (Chandler 1742)
JHoC	Journal of the House of Commons (1802)
NBER	National Bureau of Economic Research (USA)
OECD	Organisation for Economic Co-operation and Development
OEEC	Organization for European Economic Cooperation (later OECD)
ONS	Office for National Statistics (UK)
OPACS	Office for Price Administration and Civilian Supply (USA)
TMA	The Merchant Adventurers (England 1645)
UN	United Nations
UNDP	United Nations Development Programme
WPA	Works Progress Administration (USA)

Primary source abbreviations:

KCA	Kings College Archives, Cambridge University: Keynes's Papers
LAM	LSE Archives, London, File reference MEADE box/folder: page
NAK	UK National Archives: the papers of John Maynard Keynes

Bibliographic abbreviations:

U.L.	Unknown Location
U.P.	Unknown Publisher

[1] I refer to the office that produced the national account by its current name, as it simplifies the exposition. Since its founding this particular department has been called "The Economic Research Division of the Bureau of Foreign and Domestic Commerce" (or BFDC for short). It was renamed to the "Office of Business Economics" (OBE) in 1947 and finally became the Bureau of Economic Analysis (BEA) in 1971, all within the US Department of Commerce.

Introduction

Gross Domestic Product has been criticised as a poor indicator of economic growth by Nobel Prize winners (Nordhaus and Tobin 1972, Sen 1999, Stiglitz et al. 2009, 2010) and a broad range of economists (Cole 1999, OECD 2010a). I argue that these criticisms of GDP cannot effect change, because GDP is not an indicator of growth. Instead I argue that GDP is our definition of the economy by presenting the history of how the economy has been defined and measured, with national accounts, since its invention in the 1620s. GDP is simply the most recent consensus definition of the economy in a long history of definitions against which policy makers evaluate their impact and economists frame their theories.

I make my argument using history to show that Britain, France and the USA have redefined their economy, and definition of growth, several times over the last 400 years. As it turns out, our definition of the economy tends to change every 50 to 70 years and, because the available history of economics has not focussed on this issue, past definitions and frameworks have been forgotten. This is highlighted in chapter 9 where I argue that the US government avoided armaments investment in 1940 because their official definition of the economy excluded government expenditure.

This then becomes a story about the economy: about how the economy is defined and how the definition shapes the policy agenda and scholarship. To tell this story it is necessary to analyse not only how past economists measured the economy in their national accounts, but also how they got to those positions of power where they could redefine the economy. As part of that, one needs to analyse the changing nature of those positions of power and the people who held them. “By all the rules of schoolboy history books” these people were, like Heilbroner’s *Worldly Philosophers* (1972: 11), “nonentities: they commanded no armies, sent no men to their deaths, ruled no empires” but they built the framework within which theorists and policy makers would try to improve the nation. By the similar rules of historians of economics they are often the ‘honourable mentions’ of the discipline: they wrote little on class struggle, were unconcerned about labour theories of value, and did not worry about economic rents. In brief, the secondary literature is scant and often misleading.

The main reason for the lack of a secondary literature, is the emerging argument that there was no concept of the economy prior to 1760 (Schabas 2005, Hoppit 2006) or no consistent economic theories before 1750 (Coleman 1969, Thornton 2007). Another reason is the long-standing suggestion, dating from one of the first histories of political economy (McCulloch 1825), that economics prior to the 19th century was unempirical and mercantilist (Heckscher 1994, McClusker 2001). Available histories tend to focus on what economists were thinking or measuring primarily after 1750, not on the economy itself. The history of national accounting, which focuses on the framework for making empirical arguments about the economy, misses the mark in a similar way. It implicitly assumes that the economy is an invariant entity waiting to be measured by some best set of accounting tools, finally discovered in the 19th century (Giffen 1889) or the 20th century (Studenski 1958, Kendrick 1970), depending on who writes the history.

I agree with the literature that the definition of the economy changed after 1776, but I take issue with the assumptions of lack of interest in empirics prior to the 19th century, the concept of mercantilism, and in particular the conclusion that there was no concept of the economy or consistent economic theory prior to 1760. I will argue that the core of economic theory and policy making for 400 years has been an empirical debate on what defined the economy. I locate this debate by looking not only at the academic contributions of past authors – which the literature tends to do – but also focusing on the economic writers who shaped policy making and set the economic agenda of their time. As I will show, influential economists and policy makers in Britain have used empirics to construct their arguments since the 1600s, and the important people were not always scholars, especially before 1750.

To make my case I need to establish whether there was ever a time when policy makers and economic advisors thought there was no economy. Was there a time when the nation's wealth was represented through a single person and not some aggregate notion of social welfare? The first chapter argues that this is how England defined itself prior to the economic crisis of the 1620s. Like Poovey (1998) and Appleby (1987), I agree that economists constructed a space for the economy in response to the crisis, but I show how empirics were used within traditionalist rhetoric to accomplish

a consistent argument and a first national account. Empiricism became the driver of evidence in the 17th century (Henry 2008), and chapter two shows how the 17th century used empirics to define two competing concepts of the economy. I make the case that neither of these had anything to do with mercantilism – bullionist or otherwise – and both influenced economic thinking.

The period from 1700 to 1775 is usually considered a "period of neglect" in terms of economics, empirics and national accounts (Studenski 1958: 40). So much so that most histories of economics, from the classics (Schumpeter 1954, Blaug 1978) to the most recent work (Roncaglia 2005, Maddison 2007) skip the period altogether. I argue that this is a result of historians accepting the narrative of 'unempirical mercantilists' and their focus on the unimportant scholars of the period. I will show how the economics that was influential took place within government, and how it emphasised empirical thinking. I explore the period through primary sources from policy advisors and parliament to show that the 18th century before Adam Smith saw a rich economic and empirical debate in Britain.

As royal power was ceded to parliament in 1688, I show in chapter three how politics, the press, and civil service drove the economic debate and used empirics to measure their economy. From 1721 Prime Minister Robert Walpole made his policies within the concept of a circular flow economy, discussed in chapter four. This definition of the economy was based on credit and paper money, with the Treasury collecting and publishing almost annual national accounts for policy consideration. In chapter five I argue that the political fragmentation after 1742 led to an intellectual conflict between the empirically minded professionals on the one side and unempirical scholars on the other. This conflict was eventually won by the scholars, who proceeded to write the 'other' economists from the 18th century out of their histories (McCulloch 1825, Maver 1899). I look at similar debates in France, from where the British scholars copied the Physiocratic ideas (Groenewegen 1969). But, as I argue in chapter six, those ideas were rejected by French government policy makers who used empirics to define the economy, side-lining the Physiocratic economy.

In the 19th century a new definition of the economy emerged in Britain, based on the contemporary reading of Adam Smith. Chapter seven presents that consensus and argues that the 'classical economists' shared a common definition of the economy, which they used until the marginal revolution of the 1870s. With the establishment of national statistics offices in the mid-19th century, 'official' measures of the economy became standard and Alfred Marshall used such statistics to redefine the economy.

Today we agree that between 1937 and 1950 Marshall's economy was redefined to include government expenditure as a final output. But there is disagreement as to whether Richard Stone and James Meade in Britain (Comim 2001, Vines and Weale 2009) or Simon Kuznets in the US (Landefeld et al. 2009) redefined the economy. Using extensive archival material I argue that both of these established positions miss the mark. Chapter eight argues that Keynes redefined the economy to assess Britain's ability to fight the war, and he then proceeded to convince Stone, Meade and the Treasury itself to redefine the British economy. Chapter nine then argues that Kuznets, far from being the progenitor of GDP, was its biggest opponent, as he opposed the young government economists who displaced his 1930s definition of a welfare economy, conceptualised as private consumption of private market output.

If we want to understand the economics of the past, it is important to understand that the world was different then, and it was defined and measured differently. More urgently perhaps, it is only if we understand how we redefined the economy in the past that we can even attempt to redefine the economy today. My history suggests that attempts to criticise GDP today are futile, unless we understand that our debate over GDP is not a debate about an indicator. It is part of an old debate over what defines the economy. Part of that story is the recurring reinvention of the GDP economy itself in 1964, 1968, 1993 and 2008 (Vanoli 2005, Bos 2009), noted in the final chapter.

As Backhouse (1994: 2) writes about history, "changing the organizing principle has a dramatic effect on the way one has to tell the story." In telling the story of what the economy is, our interpretation of the history of economics and the definition of the economy changes. We can redefine the world: this thesis shows how that has been done in the past, and suggests how it could be done again.

The Emergence of a space for the economy, 1600-1623

> While no single event between 1600 and 1750 ushered in the new phase in European economic history, a good candidate for such a role would have been the trade crisis of 1619 to 1622.
>
> -Charles P. Kindleberger (1991: 150)

To investigate the history of the economy I need to establish a logical starting point, a time when there was no concept of the economy. Backhouse (1994: 196) argues there was no concept of the economy in Britain until at least the 16th century, although others argue that the economy only emerged as a concept in the 1760s (Gordon 1991, Schabas 2005, Hoppit 2006). I take issue with these positions by first agreeing that there was no economy in the mind of policy makers at the end of the 16th century, but the 1620 trade crisis led to the emergence of a space for the economy. In doing so, I approach Backhouse's 16th century timeline, and agree with Kindleberger (1991) that the 1620s trade crisis was a watershed moment in European economic history. My suggestion is that the crisis was a watershed moment because it led to the invention of the economy. Two historians (Appleby 1978, Poovey 1998) have made a similar argument, but they implicitly suggest that the 1620s definition of the economy was flawed, due to the 17th century use (or misuse) of empirics. Contrary to them I argue that the 1620s economy was defined along the best scientific methods of the time, and by incorporating empirics a space was created for the economy to sit in national policy making and economic discourse.

The early 17th century was a time when science meant scholastic reasoning and the nation was ruled by a divine monarch who represented the nation's wealth through his actions or by expanding the national territory. This changed with the 1620s trade crisis, as the monarch's supposedly divine ability to guide economic matters failed, and he asked parliament for help to fix the coin shortage and export crisis. The debates that ensued were not over trade and gold in isolation, but resulted in a broader debate in England, assisted by empirics, on whether there was a social sphere beyond the monarch's control where international trade should be left alone to enrich the nation. The royal economic advisor, Gerard de Malynes, kept arguing that the

monarch alone was representative of the nation's wealth and prosperity, but this point of view, I argue, was rejected. Edward Misselden, a parliamentary advisor, made the point that there was an aggregate economy beyond the monarch, served by the merchant, which represented the common-wealth.

This chapter aims to re-construct a history of how England went from a divine monarchy, with no concept of the economy, in 1600, to finding a space within traditional forms of argument for empirics and the economy - a space where free trade was beneficial to the merchant, when trade was left to its own forces to find the prices and commodities that enriched the nation.

Economic historians have long pointed to the trade crisis of 1619-22, when an export slump led to a specie shortage, as a turning point in the history of economics (Supple 1964, de Vries 1976, Kindleberger 1991). Suprinyak (2007, 2009a, 2009b) has made a detailed study of the theoretical and parliamentary debate addressing the economic crisis, but it has fallen to professors of history (Appleby 1978) and English (Poovey 1998) to argue that this debate resulted in a new space for an economy to exist. A space between that ruled by God, and that directed by the monarch. On close reading, in section 2.1, Appleby's and Poovey's argument suffers from a critical assumption. They assume that because the 1620s debate used empirics, it cannot be a wholly scholastic debate – where scientific 'truth' derived from past authority, not empirical deduction (Henry 2008).

"Scholasticism" as defined by Appleby (1978) Poovey (1998) and Henry (2008) is not necessarily appropriate as it is an umbrella term for the scientific discourse across Europe during the 16th and 17th centuries. It varied greatly in its scope and method (cf. Stolleis 1990), did not use only Aristotle as its foundations, and so it seems too broad a label for a particular type of discourse in 1620s England. Like Tribe (1978: 59), I think the word "traditionalist" best describes the form of argument in 1620s England where "the validity of the various practices that are recommended [were] being couched in terms of Old Testament homilies or reference to Greek and Roman writers." This is exactly what Appleby, Poovey and Henry intend when they propose their definition where the scientist "derived their authority partly from the bodies of

classical literature to which they alluded and partly from the power of their own rhetoric" (Poovey 1998: 82) – so I use the term "traditionalist" throughout.

If the 1620s economy was not justified on traditionalist grounds, it would not have been taken seriously by economic policy makers and thinkers of the time, and the economy was not then invented in the 1620s. I argue the opposite case by showing that the 1620s debate found a space for empirics within traditionalist reasoning.

1. Where is the space for an economy in 1600?

To understand how the early 17th century viewed their economy, we need to understand how they viewed society and how one could enquire into its health. It is perhaps not surprising that the approach in the 1600s was very different from today. What is surprising is *how* different it actually was. Europe in the 16th and many preceding centuries had been ruled as a conglomerate of princely states. The authority of the monarch, or prince, rested on his or her divine right to lead (Winks and Kaiser 2004). Under this authority, social analysis in England was performed through a traditionalist method, whereby an argument was judged according to its ability to reference classical sources, from either ancient Greece, Rome, the bible or similar provenance (Henry 2008). Science did not use empirical evidence to show that an argument was right; instead past authority and fluid prose constituted evidence. Aristotle was still the greatest influence on social enquiry in England at the time, and in the writings of the policy makers at the time he divided the world into what he called the natural and the artificial. The artificial were things made by people, such as goods or coins, and it derived directly from the natural, which meant the divine order of things. This is the presentation made by the two main protagonists of the 1620s debates, Malynes (1603, 1621, 1623) and Misselden (1622, 1623), so should not be read as an authoritative or modern reading of what Aristotle's arguments and method were – for that, a starting point could be Dear (1995) and Daston (1991).

The English authors argued that the Almighty had a representative on earth, the monarch, and it was his God-given prerogative to organise and manage the artificial, be it prices, gold valuation, taxation or national policy making. In relation to money, this point was made by the royally appointed assay master of the mint, who in 1603 wrote that:

> This money must have his standing valuation onley by publick authoritie of the Prince: To whom properly belongeth the disposing thereof, as a matter annexed to his Crown and dignitie. (Malynes 1603: 7)

It was the right of the crown to set the value of money. If the divinely chosen monarch did not, the balance in the artificial world would not be struck, and so the relationship between the natural and artificial, God and man, would be broken. The monarch could not be questioned, because

> As God's agent his word was final, for to challenge it would be to challenge the structure of God's universe; disobedience was a religious as well as a political offence. (Winks and Kaiser 2004: 7)

According to historians, the monarch was God's representative on earth, and so his word was law. How then should he rule, and by what principles could he promote the greatness of his country? At the time, there was only one way in which a nation could grow. The nation was said to be growing if the dominions of the monarch grew through the acquisition of new lands. So growth was the conquering of new lands. The greatness, or wealth, of the monarch's dominions was in turn reflected by the greatness of the monarch himself. Not the state of his subjects. The monarch brought glory to his nation, and made it great by his reputation and manner, and his display of his own wealth (Tuck 1993, Poovey 1998: 40).

As Winks and Kaiser (2004) point out, the French monarch Louis XIV (reigned 1643-1715) is probably the most common reference point for this characteristic of divine monarchy. While the 'Sun King' could not control every aspect of his realm, it was Versailles and the King's wealth which represented the wealth of France. As the English monarch's assay master wrote, it was "Princes, that are the fathers of the great families of common-weales" (Malynes 1603: 1) so let the 'father' earn more wealth, otherwise "his treasure and the wealth of the realme doth decrease" (Malynes 1601: 2). The wealth of the nation is directly tied up with the wealth of the monarch. There is no separation between monarch and nation. There is no space for an economy here.

This is not ‘mercantilist’ thinking, in the terms that Heckscher (1994) argues for, or Magnusson (1994, 1995) criticises. Mercantilism, in its supposedly ‘bullionist’ form, aimed to promote foreign trade in the interests of a positive trade balance to increase the wealth of merchants, who by importing specie enrich the nation as more hard currency becomes available to domestic industry and export activity. The wealth of the monarch is increased by the taxes charged on imports and exports, which augment his treasury and improves his ability to defend and expand the nation. Bullionist mercantilism separates the nation’s income, specie brought in by merchants to the improvement of the nation, from the monarch’s income, a tax on the specie which only improves the personal wealth of the monarch. The monarch is still important in maintaining defence and setting laws, but he cannot command more gold to flow into the country. Specie flows in mercantilism occur through international trade facilitated by the merchants, who in turn pay domestic industries, and this is what creates economic growth.

Notice how there is an economy in mercantilism, where domestic producers, international merchants and the monarchy have separate roles, and growth comes about through a positive trade balance. That is not the case in medieval Europe or, indeed, England in 1600. The wealth of the nation is embodied by the monarch’s personal wealth, however that is earned. The personal attributes and wealth of the monarch are equivalent to the wealth of the nation. The most explicit imagery of this idea is engraved on the cover of Thomas Hobbes’s influential *Leviathan* (1651), where the monarch’s body is made up of individuals all looking inward, reproduced in *Figure* 1.1.

Figure 1.1: Hobbes's *Leviathan*

Source: Book cover of Hobbes (1651), digitized by librarything.com

Leviathan was written during the 1642 to 1651 English Civil War and it was ostensibly an argument for the return to a form of government and society controlled by an absolute monarchy. The cover was produced by Abraham Bosse, an engraver in Paris (where the king was still an absolute, divine monarch in the 1640s), after long discussions with Hobbes. Notice how the idealised monarch in *Figure* 1.1 not only carries the symbols of royal power (sword, crown, sceptre), but he also physically embodies the population. It is a clear expression of the monarch as a representative of the nation, with the motto "There is no power on earth to be compared to him" (*Non est potestas Super Terram quæ comparateur ei*). It was for the monarch to rule the nation, set out economic policy (see Levy 1954), to decide religious doctrine and be the arbiter of faith. Hobbes, writing in the 1640s, did not believe that the monarch ruled by divine right, so here the similarity between him and the medieval authors end. Instead Hobbes suggested a social contract between the monarch and the people, which would outperform other types of government because "in monarchy the private

interest is the same with the public" (Hobbes 1651 [2008: 129]).[1] It is this expression of how the monarch represents the interests of the people which is so similar to the pre-civil-war days, when the monarch ruled absolutely.

Under the divine – Aristotelian – rule of 1600 the monarch set the flow of trade, through his pricing of goods and his valuation of gold, in order to equate the natural and artificial. He, like Hobbes's leviathan, represented the entirety of the nation, its people, lands and wealth. It only mattered that the monarch's wealth or reputation improved for the nation to be wealthier. The 'people' in the medieval mind-set were only significant in so far that they could be controlled by the monarch who represented the nation's wealth and glory. In *The Prince* (1532) Machiavelli makes the point that a monarch who would often be challenged – as the princely Italian states were – could build on the people, but only to cement his own power. The people would be convinced by the virtues of the monarch, not their own prosperity.

> if it is a prince who builds his power on the people, one who can command and is a man of courage, who does not despair in adversity, who does not fail to take precautions, and who wins general allegiance by his personal qualities and the institutions he establishes, he will never be let down by the people; and he will be found to have established his power securely. (Machiavelli 1532 [1981: 70])

A monarch did not build a strong or rich nation by enriching the people. A rich nation was one that "can stand alone who have sufficient manpower or money to assemble an army equal to an encounter with any aggressor" (Machiavelli 1532 [1981: 71]). The wealth of the monarch was the deciding factor, and we see the same idea in England, when one of the earliest empirical accounts of the nation was composed in 1600, to which I now turn.

1.1 Why every Englishman was an Island in 1600

Sir Thomas Wilson's *The State of England* (1600) is a good starting point for understanding where the idea of an economy comes from, because Wilson used empirics, but no concept of the economy. He makes it clear that not only is the

[1] As The Harvard manual provides no guideline for re-printed texts or translated texts in new volumes, I prefer to give the original date of publication with the new edition's year and page number in square brackets when using reproductions. See bibliographic notes for details.

monarch the representative of the nation, but one should evaluate each part of the country on the basis of their richest or grandest citizen. There was no economy, no aggregate notion of a society; only individuals who represent nations, regions and cities. He investigated each city, region and eventually nation as self-contained units where progress was measured by its wealthiest citizen.

Wilson does not investigate England as a single entity; rather he seeks out the cities first, as the smallest unit of analysis, "every city being as it were a commonwealth among themselves" (Wilson 1600 [1972: 753]). Machiavelli would have approved, as Wilson is applying the logic of national wealth – represented by the monarch – to a more localised area, the cities which will be represented by its richest or most powerful individuals. The meaning of "commonwealth" in Wilson's work is similar to that employed by Hobbes (1651: [2008: 128]): it is a unit which indicates a particular organisation of society – in this case the city - not the totality of the country. This is perhaps appropriate for a time when counties and large cities were effectively under local rule (Appleby 1978). But it also refers to the general wellbeing of a city, and here Wilson's empirics highlight how the wealth of a commonwealth should be measured.

Wilson refers to Norwich, where accounts had been drawn up showing that children between the ages 6 to 10, in the last years, have managed to earn an additional £12,000 in a year, through their work in the clothing sector. This income is not to the benefit of Norwich as such, but purely for the upkeep of the children. Following Wilson, Norwich's wealth could best be evaluated by considering its wealthiest citizens, the "24 Aldermen which were esteemed to be worth 20,000*l* apiece, some much more" (Wilson 1600 [1972: 754]).[2] The wealth of Norwich was judged by its richest, or most prolific, citizen, not by the increases in income to labourers or some aggregate income. In evaluating the state, the richest city was therefore London, because there a man "is not accounted rich that cannot reach 50,000*l* or near it" – unlike Norwich's most wealthy with their £20,000 (Wilson 1600 [1972: 754]). Wilson proceeds to give detailed income estimates for a series of occupations throughout

[2] *l* is the contemporary abbreviation for 'pound' or £, from the Latin 'Libra'.

England, so that the prince could evaluate the wealth of the nation, reproduced in *Table* 1.1:

Table 1.1: The Wealth of a Nation represented by individuals, 1600

	£ per annum
Earls (total)	100,000
39 Barons, 2 Viscounts (total)	120,000
Bishops (total)	22,500
Church Deans (total)	4,500
Knights (each)	1,000 – 2,000
Sir John Peter, Sir John Harrington and Sir Nicholas Bacon, (knights, each)	5,000-7,000
Gentlemen, around London (each)	1,000+
Gentlemen, others (each)	300-500
Gentlemen, 'great younger brethren'	Subject to elder brother
12 chief judges, sergeants at arms (each)	20,000-30,000
Common Lawyers (each)	12,000

Source: Wilson (1600 [1972: 751-7])

Wilson made no attempt to aggregate or compute one class or the other, implying that the 'state of England' was understood as the state of its best people, or the wealthiest people in the cities. Just as Norwich was represented by its richest person and the wealth of London by its wealthy merchants, the Prince represented the nation for both Wilson (1600) and Malynes (1601, 1603). Wilson's premise that "it cannot be denied but the common people are very rich" (Wilson 1600 [1972: 752]) had no bearing on the wealth of the nation beyond their ability to lend money to the monarch, as Wilson pointed out:

> Of these Yeomen of the richest sort which are able to lend the Queen money (as they ordinarily upon her letters called privy seals whensover [sic] she hath any wars defensive or offensive or any other enterprise) there are accounted to be about 10,000 in country villages besides citizens. (Wilson 1600 [1972: 753])

This is how Wilson analysed the state of England in 1600. The best citizens, in terms of wealth and behaviour, were representative of their cities or classes. In turn, those people's wealth was subject to the monarch's requirement for funds. The monarch's personal wealth, behaviour and access to finance, as the divine monarch, defined the national wealth.

In a world defined by the ability of a divinely guided monarch to balance the artificial and natural world, and then personally embody the wealth of the nation, there is no space for an economy. That is exactly what Wilson outlined in his empirical estimate: There was no economy; there were only a series of individual islands, who in turn could contribute to the monarch, who alone represented all of England.

This could work, as long as the pillars of social debate were the prince's authority, traditionalist methods and Aristotle's division of the natural and artificial world, ruled by the deity and the divine monarch on behalf of the deity. But when a decade long export boom came to an abrupt halt in the 1610s, trade deficits, unemployment and dwindling specie reserves followed. The monarch's inability to address the crisis led to questions over his ability to control and represent the nation (Kindleberger 1991). I argue that it was this inability to deal with the crisis that led to the conceptualisation of an 'economic sphere', but to argue that, it is necessary to understand how different this crisis was.

1.2 Going from Boom to Bust

From James I's accession in 1603 to 1614, the English cloth exports boomed. The establishment of the revised Corn Laws in 1601 and the resulting concentration of cheap labour in parishes and workhouses had made it possible to expand cloth production and exports, resulting in some social calm (Supple 1964, Appleby 1978). But in 1614 the cloth trade peaked. As demand fell, James I responded by lowering the silver content of money to keep more specie in circulation, but encouraging capital flight of specie. Unemployment followed the fall in demand, as did a rising inflation, which re-oriented domestic demand away from cloth toward necessities.[3] The economic crisis from 1619 to 1622 was unlike any in British memory. It was not a crisis caused by the natural; it came from the artificial, which the prince was supposed to control.

> Traditional expectations lost their credibility, and the increasing invisibility of buyers and sellers prompted men to treat them as impersonal economic agents.

[3] Supple (1964) is the standard account of the crisis, although de Vries (1976), Appleby (1978) and Kindleberger (1991) all describe and analyse the events of the time.

> Harvest destroying rains could be seen, felt, smelled… [But the lack] of tactile experience promoted the creation of symbolic representation. Gluts in foreign markets had to be imagined… Price, Rate and credit came to stand in place for the bargain, the payment, the contract they represented. (Appleby 1978: 20)

The crisis was caused by the artificial, which should have been the king's God-given domain. Tragically the natural world did not help. 1621 and 1622 were both years with very poor harvests, pushing the price of food up and necessitating the importation of grains. In light of these events, James I did something unheard of. The divine monarch asked the House of Commons for help, rather than dictate policy at the irregularly summoned parliament (Suprinyak 2009a).

Until then, parliament had been a gathering of land owners and gentlemen, summoned at the King's behest to legitimise taxes and then summarily dismissed by the king if it disagreed with him (Winks and Kaiser 2004). Now King James I was asking parliament directly for policy advice on how to address the coin crisis, repeating that he would "treade in the houses steps" as far as he felt necessary (CD 1621: VI: 410). Suprinyak's analysis of the parliamentary papers of 1621, on which I rely as it stands alone in the literature, suggests "these were not empty political promises" (Suprinyak 2009a: 4).

Parliament summoned merchants, traders, professionals and royal advisors to get opinions and ideas on what had gone wrong and how to correct it. The issue was opened up to the whole House, which began the debate immediately. The scarcity of coin and metals were discussed, as was the issue of declining trade. But they were discussed as separate problems, because they were separate powers which the king wielded in his capacity as a divine ruler. After three months' debate, parliament referred the two issues to a single committee (CD 1621, III: 3-4, V: 331), which Suprinyak (2009a: 9) takes as an indication of the two issues being connected in the minds of the policy makers. This is significant, because it suggests that two hitherto separate artificial topics were combined into one interlinked issue. Suprinyak (2007, 2009a) argues that the parliamentary thinking inspired the well documented economic controversy of 1622 between the King's assay master, Gerard de Malynes, and a

Hackney merchant, Edward Misselden (see Johnson 1933, Gould 1955, Supple 1956, Appleby 1978, Kindleberger 1991, Backhouse 1994, Desmedt 1998, Poovey 1998).

This focus on Malynes and Misselden is usually presented as a written debate between two scholarly merchants who argued over the proper role of what determined the exchange rate within the "balance-of-trade doctrine" (Blaug 1978: 10, Backhouse 1994: 113). Malynes is supposed to have argued that the low silver content of money under-valued English money and caused goods and specie to flow out; Misselden counter-argued that it was the flow of goods that governed the value of money and movement of specie. But this search for past academic debate is an anachronism. Scholars did not influence policy on the basis of empirical evidence in 1620. Traditional evidence was based on past authority, not empirics and academic debate, while the monarch made policy.

Malynes and Misselden's books are not arguing a modern academic and empirical point; they are traditionalist, Aristotelian, divine-authority-believing contributors to the House of Commons debate. The suggestion that Malynes, of all people, should have subscribed to a doctrine where "a favourable balance of trade is desirable because it is somehow productive of national prosperity" (Blaug 1978: 11) flies in the face of what defined the economy at the time. For Malynes there was no economy. It was not the case that "the two positions were based on different views as to how the economy worked" as Backhouse (1994: 134) suggests. Rather I argue it was a case of two merchants submitting their traditional arguments to the House of Commons, where Aristotle and the monarch still ruled, where there was no overall economy, but there was a disagreement about the space for certain economic activity, where the king's influence was no longer needed. Was there a space where individuals could decide to trade freely, could allow prices to find their own equilibrium, and still balance the artificial and natural? Malynes, a royal supporter for two decades, argued the monarch's authority over all economic activity was absolute, but Misselden argued that trade was beyond royal control; there was an economic sphere with economic forces.

2. The traditionalist reply to the crisis

In 1622 Malynes published a response to Edward Misselden (1622) who had advocated the freeing of trade to solve the crisis. This section will show that while the balance of trade was indeed at the core of this debate, as Blaug (1978) and Backhouse (1994) argue, it was a traditionalist debate between Malynes, who thought there was no economy, and Misselden, who thought there was.

Appleby (1978) suggests that Malynes's 1622 work indicates a change in opinion about what defined the economy, because Malynes was separating the economic activity – the "traffick and Trade" – from its artificial place in the world:

> The sacred wisdome hath approved this axiom: That a King is miserable (how rich soever he be) if he raignes over a poore people, and that, that Kingdome is not able to subsist (how rich and potent soever the people be) if the King bee not able to maintain his estate… [All this is] depending upon Traffick and Trade. (Malynes 1622: D2)[4]

But Malynes is not indicating that the nation will benefit from individuals earning more money or that the trade balance is somehow linked to economic prosperity, quite the contrary. He indicates that the King would be "miserable" if the people were poor "how rich soever he be" – so the king can be rich but perhaps feel like a pauper if his people are not wealthy. But if the monarch is unable to maintain his own estate then "the people could not subsist", no matter how rich the people are. Malynes repeats that "the state of a Prince doth as much consist by reputation, as by strength" (1622: 20), maintaining his earlier position about the role of the monarch (Malynes 1601, 1603). By reputation he still means the behaviours that made a monarch great, while his authority remained "the providence of the state" (Malynes 1622: 68). Unlike Appleby's suggestion that the mention of "traffick and trade" redefined the economic boundaries, I submit that it was simply identifying the most important income source for the monarch. Income came from the trade balance, and the trade balance was set by the monarch. Malynes was not suggesting that the national prosperity would somehow be improved by enriching the population at large. He was arguing, as he had

[4] Throughout the thesis, all emphasis in quotes are from the original text unless otherwise indicated

for twenty years, that the monarch would be concerned about the people, but what mattered was the reputation and wealth of the monarch, which was most influenced by the trade balance. Poovey (1998: 72) follows Appleby and argues that the Malynes-Misselden debate poses three interconnected questions:

> What, if anything was the ground (or 'center') of value? On what basis should knowledge about the economic matters be considered authoritative? And what should be the relation between a prince, the nation's treasure, and the 'greatness' of the country? (Poovey 1998: 72)

It is the third of these which looks at where an economy might emerge, but Poovey and Appleby are most interested in addressing the basis for claims of truth in the 18th century. They could not do so without addressing what defined value and whether the monarch had the right to set the value of gold, in order to balance trade. If the divine monarch still sets the price of gold, which Poovey (1998: 72) concludes that Malynes argued, then the Aristotelian division remains intact.

What then happens to the 'greatness' of the nation? The implied answer is that the relationship had shifted. As Appleby suggested, the conventional wisdom where national greatness was defined as the monarch's wealth was being replaced, and by 1623 "the conventional wisdom became harder to defend" (Poovey 1997: 73), but neither Poovey nor Appleby make this case for an economic sphere explicitly. The traditional history of economics literature takes it as given that Misselden and Malynes started out with an economy in mind – a position neither Poovey, Appleby, nor, as I will now show, Malynes, supports.

When Malynes (1622: 3) accepted that for commodities "The price thereof in exchange doth rise and fall according to the scarcity and plenty of money" he still maintained the Aristotelian view of exchange. As the price of exchanging money fluctuated, the king needed to be "directing and controlling (by just proportions) the prices and values of commodities and moneys" (Malynes 1622: 2). So the monarch needed to set the price of gold to ensure that the fluctuation of commodity prices was

> fastened upon the rule of the equalitie of Moneys according to their weight and fineness, to be denominated by the valuation of princes as a matter peculiarly pertaining to their prerogatives. (Malynes 1622: 9)

Note Malynes's underlining here. It is the "valuation of princes" according to their "prerogative" who set the "rule of the equalitie of Moneys." There is no market force - there is simply the force of the prince regulating trade up and down by setting the value of gold higher and lower.

This issue of pricing remained a royal prerogative to Malynes, with a divinely guided monarch. Over-pricing, warned Malynes (1622: 40), "provoketh Gods anger against us in the highest degree" and only through the acts of the Prince could such over-pricing be avoided. The Aristotelian division and divine monarchy was maintained by Malynes. Despite this, Poovey (1998: 73) argues that Malynes would be forced to change his mind because of a "growing sense" that the king, even if he re-set the value of gold, could not "dictate the fate of English money in an international system." There is nothing to suggest that Malynes had any such qualms, nor is there evidence that such a sense was growing. Indeed, Malynes's persistent defence of the monarch's absolute power over trade and prices is what led Misselden to publicly counter-argue in 1622. A similar argument had already been made by Thomas Mun in 1621, an oft-cited ally of Misselden (see Backhouse 1994: 123). But Mun's book was not traditionalist in the least, much like his later work which is supposed to have laid down 'mercantilist' doctrine – which I will address in the next chapter – and it was probably not taken very seriously because it was not 'scientific' – in the traditionalist sense. The main question is then whether Misselden could provide a counter-argument to Malynes in traditionalist Aristotelian and therefore scientifically valid terms.

2.1 Misselden's challenge seems to fall short

Misselden's *Circle of Commerce* (1623) is an argument wrapped carefully in Aristotle's division, and in doing so, it re-defines the space where trade operates. Appleby (1978: 47) makes the case that Misselden *implicitly* argued that the dividing line between the artificial society (as ruled by the monarch) and nature (as ruled by God) needed re-adjustment so that the economic factors of trade would move from the

artificial into the natural. The issue of implicitness is important, because Misselden was not making his case implicitly; he was making an explicitly traditional argument to refute Malynes. It may not be an empirical 20th century scientific argument, but it was an argument valid and scientifically correct for his time. If Misselden is making a traditionalist case, he cannot simply be treated as 'mercantilist' but must be considered a pre-cursor to such thinking. Then, if Misselden successfully puts forward the balance of trade as the valid place for independent economic transactions where the nation as a whole benefits, the 'balance of trade doctrine' becomes a traditionalist point. If the balance of trade doctrine is traditionalist, the people we now call mercantilists have a real problem, because the traditionalist method is rejected by later economic authors (including Thomas Mun himself, in 1630) and that allows us to question the idea of mercantilism as a valid narrative for the period 1620-1770. To arrive at that point, it is necessary to show how Misselden's commonwealth is different from Malynes's earlier ideas. Appleby believes this is clear from the following passage where Misselden defines the "Common-Wealth" as the wealth of all the people in the nation, not the monarch alone:

> Is not gaine the End of trade? Is not publique involved in the private, and the private in the publique? What else makes a Common-Wealth, but the private wealth, if I may say so, of the members thereof in the exercise of *commerce* amongst themselves, and with forraine Nations? (Misselden 1623: 17, quoted in Appleby 1978: 45-6)

Misselden made the claim that the public and the private should be considered as the same common-wealth in relation to trade. To Appleby this implies that the monarch and the common man had the same relationship with commerce. The monarch should not set prices and trade volumes, but rather engage in trade. Note that Misselden wrote "amongst themselves, and with foreign nations" so he is not necessarily making a balance of trade argument alone. Poovey (1998: 74) quotes Misselden to argue that the "right" price would emerge "according to the circumstance of *time*, and *place*, and *persons*, because this… allows for – although does not guarantee – profit to him who is willing to risk" (Misselden 1623: 98, quoted in Poovey 1998: 74). According to Appleby (1978: 45) and Poovey (1997: 75) Misselden's price would be established according to "natural justice", because commerce was ruled by contracts of trade:

> As it is *A voluntary Contract, made by the mutuall consent of both parties*; so are both alike free to *Take* and *Deliuer* at their owne pleasure, as in all other contracts and bargains of buying and selling. And trade hath in such a kinde of naturall liberty in the course and use thereof, as it will not endure to be fors't by any. If you attempt it, it is a thousand to one, that you will leave it not worse than you found it. (Misselden 1623: 112)

Misselden argued that a voluntary contract entered into by two agreeing people would ensure that both people gained. If a trade was not mutually beneficial each party would not "take" or "deliver" the goods being bought and sold. In that, there was a natural liberty which could not be forced by anyone, not even the monarch.

But there is a problem, as the logic is incomplete. Misselden had, according to Appleby and Poovey, implied the existence of a new dividing line between the natural, which was ruled by the divine, and the artificial, which was ruled by the monarch. Misselden's statement moves international trade from the artificial to the natural. That is why the prince should no longer interfere, as there would be a 'natural justice' in the system (Appleby 1978: 45). But, as Poovey argues, Misselden "did not quite make trade a natural entity" (Poovey 1997: 75). The implied message of Misselden's book could not, according to Poovey and Appleby, be reconciled with the Aristotelian terms he wrote the book in. If that were the case, then Misselden's whole book would not be a consistent traditionalist argument for economic activity to exist, but an inconsistent diatribe.

If Misselden had *not* fully moved trade from the natural to the artificial there was no reason for the prince not to set the price in the artificial realm of commerce. When two merchants made a trade, it would still be beneficial to them both, but they would not set the price through their actions but rather adhere to what was the monarch's prerogative. There was no need to re-evaluate the definition of the common-wealth. The prince was still needed to impose God's will on commerce; there was no logical new space for commerce or economic activity. Had Misselden broken with the Aristotelian division he would not have been taken seriously at the time. The next sub-section argues against Poovey and Appleby's assessment of Misselden. He did

adhere to the Aristotelian division as conceptualised in England at the time, and he did move trade out of the monarchs reach in the artificial realm, and he did so very carefully.

2.2 Misselden's careful, and logical, use of Aristotle

I argue that Misselden explicitly wrote that the monarch should stay out of commerce, he did not imply it. He did so by carefully dissecting the Aristotelian division, and re-inserting commerce into the natural world. Thereby making it part of a divine system, finding its own balance between prices and goods, through the wants and needs of buyers and sellers. For Aristotle, as for the philosophers and policy makers of the early 17th century, all things were either natural or artificial. This was known as the essence of a given object. The essence was broken down into a form and its matter, as Misselden explains:

> *Aristotle* reduceth into *Matter*, *Forme*, and *Privation*: yet so as he excludeth *Privation* from the *Being* of naturall things. (Misselden 1623: 11)

To avoid a deeper, and very long, debate on the exact forms of Aristotle's divide – which is a topic in its own right[5] – the meaning of matter, form and privation are easiest to understand through an example, which I borrow from Misselden (1623: 12) and is core to understanding his argument.

Consider a ship. The ship is artificial, as it is man-made. So in "essence" it is artificial. The ship is made of timber and iron, which is the "matter." Through the work of the carpenter, the matter is given the "form" of a ship by a mould and its proportions. If we were to take the ship apart, we would be left with the matter, which could be reconstituted into a new ship or something else. In contrast Misselden presents something which is not man-made, the human eye. In "essence" the eye is natural. The matter of the eye is an "Oculary substance" and through the work of the body, the matter gives the "form" of sight. If we were to remove sight from the eye, we would be left with oculary substance but it can no longer be used to see. Because we removed the form – sight – there is a new form, blindness, which has nothing to do

[5] Poovey (1998: 7-9) gives a nice introduction to Aristotlean scientific thinking.

with sight. The defining difference between the natural and artificial was the fact that you could remove the form of the artificial and reconstitute it, but this could not be done for something which was natural in essence.

Table 1.2: Aristotle's division explained by Misselden

Essence		**Matter**	**Form**
Artificial	Ship	Timber & Iron	Ship
Natural	Eye	Oculary substance	Sight

Source: Misselden (1622: 11-12)

When the form was removed, it was called "Privation" or "absence" whereas when the form was maintained it was "present." So the natural, as Aristotle argued and Misselden repeated, can only be present, because if it is absent the matter cannot reach the same form. The point is effectively that if something is natural in essence, its matter cannot be modified by man to reach its natural form. This would make it part of the divine, and beyond the earthly powers of the prince to regulate. Given this distinction, Misselden argued that:

> Likewise in the traffique of Merchants, which is also an artifical thing, there are no other *Essential* parts, than the *Matter* and *Forme* of trade. The *Matter* as I shewed before, is merchandise and money, whether exchanged or not exchanged. The *Forme* is buying and selling, and as we say, chopping and changing of one thing for another: which in one word is called *Commerce*. Without which there would bee no traffique amongst men, notwithstanding the materials of trade (Misselden 1623: 11)

In the "traffique of merchants" artificial things are being transported and traded forth and back. As with anything, there could only be one essence. That essence was the trade which the merchants take part in. But was trade artificial or natural? Following Misselden, trade is made up of "merchandise and money", which is the matter, merchandise meaning goods and money meaning gold. The "buying and selling" of the matter is then the form. If we take away the form, the essence of trade changes and man cannot modify the merchandise and money to make it into trade, so trade had to be natural:

Table 1.3: Misselden makes international trade natural

Essence		**Matter**	**Form**
Natural	Trade	Merchandise & Money	Buying & Selling

This was similar to how losing the form of the eye, sight, led to a new essence which could not be a seeing eye. By that logic, trade could not suffer from an absence of form, because without buying and selling, merchandise and money are not traded, and the essence is changed. This meant that the essence, trade, was natural and not artificial. The monarch was not needed to regulate prices or trade because they were natural and assured a balance without interference. An indication that Misselden's reading and argument was taken seriously is found in Malynes's 1623 book, where Malynes counter-argued that the gold price itself was part of the trade. Misselden in turn (1623: 7) rejected this, because essence is a singularity. It could either be trade or money, not both.

> Which he [Malynes] might haue better understood, if he had beene able to consult with Aristotle, or any of his interpreters. But alas, how should he understand him or them, when he cannot so much as translate a sentence of him out of Latin, much lesse out of the Originalle. (Misselden 1623: 12)

Malynes was wrong, according to Misselden and traditional evidence, because he did not understand Aristotle – or Latin and Greek for that matter. Unlike Poovey and Appleby's suggestion that Misselden had not applied traditionalist principles, or the broader literature's suggestion that Misselden was breaking with tradition and looking at a non-traditionalist or mercantilist economy, this analysis by Misselden suggests the opposite. He had worked trade into a part of the Aristotelian divide where the form and matter should be left free, so commerce (buying and selling) as well as the price of gold should not be interfered with by the monarch, because they found their own natural balance.

On top of this, Misselden then argued that trade was good in general. Following Aristotle, whenever something became *present* it reached its "end" which in the case of sight meant an observation. In trade, Misselden asked: "is not gaine the end of

trade?" (Misselden 1623: 17). The implication being that the presence of trade leads to a gain by the trading parties involved, thus re-enforcing Misselden's point that free exchange would only take place when it was mutually beneficial.

While maintaining the Aristotelian divide, Misselden had not only generated a new space for the economy but re-defined the relationship between trade, money, and the nation. He had put a part of the previously artificial world beyond the reach of the monarch. He had, I argue, provided a rationale for a 'third' sphere in society, an economy. Misselden maintained the traditional method, which is why there was no independent entity one might refer to as the economy – there could only be the natural and artificial. Instead, there was a way for the country to grow which did not require the physical borders to expand and did not depend on the wealth and dignity of the monarch. That improvement could happen in the natural sphere of trade, where contracts led to a gain between two traders. Misselden's next ambition was to show how trade, which was not ruled by the monarch, could contribute to national wealth, or what he termed the common-wealth.

2.3 Accounting for the benefit to the common-wealth

Misselden's argument relied on traditionalist logic and used empirics to highlight that his theoretical reasoning was sound. As he had only shown that international trade was in the natural part of the world, I presume that he focussed on it in his account. There was no point discussing the artificial domestic trade as the prince was responsible for balancing that part of the world. In traditional fashion, Misselden attempts a reference to past authority to justify his use of empirics:

> The comparison shall bee of two precedent *Formes* which I have found out. Whereby it may appeare, that this *Balance* out of the Kingdomes trade is no conceit or Nouelty, but hath been the wisdome and policy even of elder times, to make a priuy search and strict enquiry of, by this kind of scrutiny, into the state of times and trades. (Misselden 1623: 118-9)

For Misselden to use empirics it was important for him to establish that empirical accounts were not new or revolutionary. To do so he argues that "the former of these Precedents, shal be an ancient *Ballance of Trade*, which is said to be found upon

Record in the *Exchequer*, in the eight and twentieth yeere of *Edward* the third" who ruled from 1327 to 1377 (Misselden 1623: 119). This dates a "Balance of trade" to the year 1355 or 1356, where Misselden shows an export total of £294,184, and imports of only £38,970. It is unclear whether Misselden re-constructed the table, but by his referencing, it would appear that such a table was recorded and used already in the 14th century. Misselden's point is that he is not proposing the use of empirics as a new form of basis for social or scientific investigation – which some of his contemporaries like Francis Bacon (1620) had begun pushing for (Henry 2008: 2). Misselden had no intention to replace Aristotle's ideas; he was trying to build on them or at the very least, use them.

Misselden produced an English balance of trade account, from the peak of the wool exports in 1612-13, and for the years when the crisis peaked in 1621-22. The raw data was extracted from custom books and dock records, focusing on the custom earnings, and then multiplying it up by the appropriate factors to arrive at the value of the goods being imported or exported. I re-produce this in *Table* 1.4, as it has not been displayed in the literature previously:

Table 1.4: Balance of Trade for England from Christmas 1612-13 and 1621-22

	1612 – 1613			1621 - 1622		
	Exports			**Exports**		
	£	s	d	£	s	d
Customs of the Port of London	61,322	16	7	50,406	6	4
Customs of the Outports	25,471	19	7	26,756	18	0
The custome of wrappers of clothes, bayes,[6] and cottons, free of costume	7,000	0	0	5,000	0	0
Own Fisheries	7,000	0	0	7,000	0	0
Exports under certificate, or re-exports of unwanted goods[7]	3,737	4	5	8,050	0	0
Total for the customs	104,532	0	7	97,213	4	4
Customs multiplied by twenty as customs are 12p in the £	2,090,640	11	8	1,944,264	7	1
The net custome of which value at 12p in the pound, the Wrappers, Fish and Goods shipt out by certificate deducted	86,794	16	8	77,163	1	5
The import of Bayes, Tinne, Lead, and Pewter, which only are imposed outwards	10,000	0	0	7,370	1	5
The merchants gaine, fraight and petty charges (15%)	30,000	0	0	291,639	0	0
The Total Exportation with charges	2,487,435	7	10	2,320,436	12	10
	Imports			**Imports**		
	£	s	d	£	s	d
Customs of the Port of London	48,250	1	9	68,380	9	1
Customs of the Outports	13,030	9	9	19,579	2	6
The custome of Wines of all sortes, all other Merchandise being included in the former is,	45,777	0	0	3,200	0	0
The Custom amounts to	107,027	11	6	91,059	11	7
One third part thereof to be added, for the underrating of Goods in Custome, to what they are worth, or cost	0	0	0	30,353	3	10
Also the 1621 allowance of 5% opon £91,059. 11. 7.	0	0	0	4,552	19	7
The total summe amounts to	0	0	0	125,965	15	0
Which totall, being multiplied by 20 produceth the value of all the goods Imported	2,141,151	11	6	2510,315	0	0
Fine Goods Secretly conueied inwards, more than outwards				100,000	0	0
The Total Exportations	2,487,435	7	10	2,320,436	12	10
The Total Importations amounts to	2,141,151	11	6	2,619,315	0	0
The remainder	346,283	17	10	-298,878	7	2

Source: Misselden (1623: 121-2, 127-9)

[6] Bayes meaning Coarse woollen cloth

[7] For 1612-13 this is an aggregate for silks, Venice gold and silver, French wines, Spanish wines, allowances, underrating of silks, underrating of wines, linens and merchandise.

From this Misselden explained that the mid-14th century was popularly seen as a "golden age" where net exports had been £255,214; 1614 had been considered more of a "silver age" with its balance of trade surplus of £346,283; and the current crisis an "iron age" with a corresponding trade deficit of £298,878 (Misselden 1623: 123). Misselden observed that the more recent total exports were £2.4m in 1612-3 and £2.3m in 1621-2 but the nation had been better off when it only exported goods worth a total of a few hundred thousand in 1355. This made him suggest that the absolute size of the balance of trade was of less relevance than the net exports, and until that came into a surplus, the crisis would not end.

> Untill the Kingdome come to an *Ouer-balance of Trade*, the *causes* of the Decay of Trade cannot be taken away. (Misselden 1623: 131)

The balance of trade, which accounted for the exports and imports, were tied up with the current crisis as well as the money shortage and the general social problems, much as the House of Commons had come to see the issue (Suprinyak 2009a). This is clearly an expression of what has since been dubbed a balance of trade doctrine, but it is an argument based on the traditionalist method backed by empirics, not empirical thinking.

> If there be any vertue in the Theorick part of Commerce, that might attract a Princes Eie to be cast upon it; surely it is in this kinde of *Exchange*, that one Country maketh with another in the *Ballance of Trade*… All the knowledge of Commerce, is presented and represented to the life in this story, in this history. All the riuers of Trade spring out of this source. (Misselden 1623: 142)

The "theorick" or theoretical interest in commerce should focus on the balance of trade, when the prince and parliament sought to address the current crisis. Because the balance of trade was an empirical source of knowledge in the older works – such as the 14th century trade accounts – Misselden felt justified in using empirics to derive useful information. It had to be recognised that the prince could not legislate and control international trade, but legislation could help guide what the forces of natural liberty would settle. Misselden gives perhaps the earliest exposition of what has been called the balance of trade doctrine, where a net surplus on the balance of trade leads

to national prosperity and encourages domestic trade. But this is an argument made in the traditionalist English manner. In a time where authority derived from past sources and reference to the Aristotelian divide.

3 How the economy was invented: a conclusion

By 1623 Misselden's traditionalist argument against Malynes appears to have closed the debate, not in the sense that a community of policy advising academics accepted Misselden's arguments – an anachronism for considering 1620s policy making – but in the hierarchy of policy makers at the time. There is some indication of this preference when the secretary to the Chancellor accepts Misselden's request to dedicate his book to the Lord High Treasurer, while Malynes's similar request was denied (Suprinyak 2009b). This also implies that policy is not being driven by royal grace, as neither man seeks to dedicate his work to the prince – for whom Malynes had worked since 1601. The official English interpretation of the world had changed, and it had done so through a shift in power from royal advisors to parliamentary policy makers. This facilitated the movement of international trade away from the control of the monarch in the artificial realm into the natural realm of Aristotle's division, where economic prosperity could be driven by free trade and the wealth of the people engaged in the trade, not the monarch's wealth alone.

In 1603, Malynes wrote that it was "Princes, that are the fathers of the great families of common-weales" (1603: 1). Twenty years later, Misselden had displaced this view and now the focus was "The Royal Merchant, the Regall Father of that *great family of a Kingdome*" (Misselden 1623: 130-1). A traditionalist shift from prince to merchant, from the prince's wealth to the wealth of the kingdom, defined as the net income from abroad.

> A close examination of the writings on economic topics in seventeenth-century England reveals distinctly radical reworkings of the meaning of wealth, money, private initiative, economic growth, and the motive of gain.
> (Appleby 1978: 18-19)

I agree with Appleby when she says that the economic literature in the 17th century radically reworked the meaning of economic issues, she was just not entirely clear on

how the economic discourse that influenced policy makers changed. Backhouse hits the mark for me in echoing Kindleberger's (1991) argument that "of particular importance was the crisis of 1620-1, for it was in response to it that the Balance of Trade doctrine was developed" (Backhouse 1994: 113). I would agree with this, insofar that a conclusion was reached where the net balance of trade was seen as the creator of national wealth, but it is not the case, as others have suggested, that this doctrine would underpin mercantilism. According to the literature, mercantilism was not traditionalist, but I hope to have established that Misselden's argument and the balance of trade doctrine were wholly based on traditionalist principles. This causes a problem for our understanding of mercantilism, and indeed the economics of the later 18th century, unless someone translated Misselden's argument into something other than a traditionalist one.

From Wilson (1600) to Misselden (1623), traditional rhetoric was the vehicle of debate for defining the economy and economic activity. From the Middle Ages until 1620 economic policy was based on the notion that what was good for the monarch represented what was good for the nation as a whole. Growth was the outward behaviour of the monarch, his wealth, and his ability to gather revenue when required. For that, the monarchy required regular accounts of both the prince's holdings and also the holdings of those who could lend money to the monarch. These can reasonably be referred to as national accounts, and had been used long prior to 1600, as Wilson remarks about the 16th century monarchy:

> I have seen divers books which have been collected by secretaries and counsellors of estate which did exactly show the several revenues of every nobleman, knights, and gentlemen through the realm, and curiously collected by an uncle of mine which not long since was principal secretary to the Queen. (Wilson 1600 [1972: 754])

Wilson's uncle was Dr. Thomas Wilson, a noted author, scholar, and the Secretary of State from 1577 to 1581 (Thirsk and Cooper 1972). Under this traditionalist or Aristotelian system, where the world was divided into the artificial and the natural, there was no space for an economy or autonomous economic forces. Everything was

either ruled by the monarch or by God. The way to account for that economy was quite logically to compose accounts of the prince's access to wealth.

A national account is then a record of how an economist, policy maker or author defines the nation and its income. Misselden put together what we today consider an account for part of the economy, the current account. For Misselden this was an account of the only commercial activity which could gainfully reward the people and which was not controlled by the prince. He opposed the arguments of Malynes on its own traditionalist grounds and like Viner (1937) and Magnusson (1994, 1995) I argue that Misselden was successful in his refutation. Misselden used empirics to back up his traditionalist argument, but not for any revolutionary reason as he kept his argument rooted in this method. By shifting international trade from the artificial to the natural, Misselden set out a valid sphere for economic forces, guided by God, but facilitated by traders and their natural liberty. The nation would benefit from net exports on the balance of trade, and it is here, with his empirics, that Misselden has some unexplored tension with traditionalist definitions of the economy. If the nation was enriched by net exports that did not directly benefit the king and did not expand the borders – what was growing? Misselden would have replied that the common-wealth was growing, and "What else makes a Common-Wealth, but the private wealth, if I may say so" (Misselden 1623: 17).

Misselden broke with the definitions of Cicero, Botero and Machiavelli, who defined the greatness of the state, or the economy, as the personal greatness of the prince. He did not, I contend, break with traditionalist rhetoric. For Misselden the economy was best represented by the private wealth of the population as a whole, the aggregate nation. That, while not explored fully by Misselden himself, is what we today would call the economy, or what he called the common-wealth. So it is in Misselden's treatise that we find the first expression of an autonomous entity where economic forces have an effect and are balanced, not by the 'market', as we argue today, but by the deity on the natural side of Aristotle's divide. Misselden was a radical in his definition of the economy, and I suspect if earlier authors had made a similar argument, they would have been exiled for insulting the monarch – as indeed were French authors like Vauban (1707) or Boisguilbert (1707a, 1707b) when they

proposed similar ideas to the divine monarch of France in the early 18th century (Studenski 1958). Monarchs ruled nations as the right hand of God in the 17th century, so questioning their authority over parts of the artificial realm and suggesting that their own wealth was not representative of the country's wealth would have been deeply unpopular, if not outright treasonous.

But Misselden could challenge that status quo because of the deep economic crisis, and because parliament had been requested to address it. Parliament had connected the scarcity of coin and loss of exports as a single matter for enquiry, and the monarch had publicly acknowledged that his own wealth was not helping the situation. In that environment, Misselden, like Malynes, proposed theories and solutions within the scientific paradigm of the day, and it was Misselden's ideas which were adopted.

More radical arguments were also being made at the time, even within parliament. Like Francis Bacon (1620) and others, Thomas Mun, who has since been called the father of mercantilist thinking, both challenged Malynes and eschewed the traditionalist approach (Henry 2008), as I demonstrate in the next chapter. At the time, Mun's 1621 book was not dedicated to any parts of the establishment, and while he favoured international trade, it was Misselden's work which was taken on board, presumably because it was based on traditional sources of evidence. The traditional rhetoric of the time was more influential than empirical reason, and, based on that, the balance of trade doctrine was developed. As I will argue in the next chapter: it barely survived ten years.

Misselden had invented a space for economic activity to happen freely. He had taken international trade out of the artificial realm and placed it in the natural realm where the deity would ensure a balance, where individual traders should be allowed to make transactions free of the monarch's influence. He had provided a space for economic forces which stood apart from the monarch and was guided by the actions of traders. The notion that no economy existed in the minds of policy makers and economic writers prior to the 1760s (Schabas 2005, Hoppit 2006) seems to be contradicted by Misselden's effort to include economic activity in traditionalist thought. As it turns out, Thomas Mun rejected Misselden's traditionalist method in 1630 and expanded on

the notion of what he thought an economy was and how one could enrich it. He did so with empirical evidence, in a period of further political upheaval. As the next chapter illustrates, Mun's work, and that of the later 17th century, was neither traditionalist nor was it the basis for Blaug's "balance of trade doctrine" (1978: 10). The supposed mercantilists, as Schumpeter (1954 [1981: 318]) long ago pointed out, had barely any "uniform opinions at all" and were not a group of authors who shared a common view of the economy (Magnusson 1995). Instead, as I will argue throughout the next four chapters, mercantilism is best considered a time-period from the 1620s to the 1770s where economists used empirics to answer the most important question at the time: What defines the economy which Misselden had found a space for? It is a debate we have continued until today, even if it now lies hidden within national accounting systems.

This bullionist view of mercantilism which I have discussed above is not the only view of English economic discourse in the mercantilist age (1620-1780). Peter Groenewegen neatly summarises the state of affairs when he notes that

> The meaning assigned to mercantilism has of course been one matter of controversy. It has been used to refer to a system of economic policy, to State building and a system of nationalism, but for historians of economics it has tended to mean a body of literature, drawn from all parts of Europe, and especially England. (Groenewegen 1995: 132)

Groenewegen's "historians of economics" is a category I will use throughout this thesis to refer to scholars who work on the 'history of economic thought' and 'economic history' as the study of history has been sub-divided within economics. Other readings of history in this tradition have emphasised mercantilism as a system of rent-seeking (Ekelund and Hébert 1990), state management (Viner 1948), commercial language (Magnusson 1994) or nationalism and trade (see Magnusson 2004). My argument about the mercantilist age here is twofold: First I want to show that the conception of the economy in the 1620s debates were not identifiably as a 'mercantilist' economy, but rather an economy rooted in traditionalist methods of science and the emerging empiricism where an economic realm was created and accounted for. Secondly, over the next four chapters I argue that the dominant theory

of the economy in England during the mercantilist age was not a single doctrine. Rather it was a changing set of definitions, all of which were built around empirical investigations and the reinvention of what the economic space meant.

Therefore, we should not be disappointed, like Roncaglia is, that "on the negative side, the authors of the period fail to attain a coherent system of interpretation of economic reality" (2005: 44). Because there was not a single tenet of mercantilism, as has been pointed out many times before (e.g. Judges 1939, Schumpeter 1954), there was no consistent theory for the 150 years of the mercantilist age – but there were a number of dominant theories at different times. There were empirical expressions of these theories which guided policy and defined the economy for decades at a time.

The theoretical differences between authors throughout this mercantilist age stem from the difference in how scholars and policy makers defined the economy. Wilson, Malynes and Misselden would never have agreed on what was best for the economy, because they defined it in diverging traditionalist terms. The same is true for the mercantilist age, where they also defined it in contrary theoretical terms, but based on empirical evidence not traditionalist argument. The 17th century was a period of revolutions, not only about the validity of scientific evidence (Henry 2008), but also when it came to who decided policy and where the theoretical debate should be carried out to influence policy. The next chapter aims to show how the non-traditionalist economy was defined and sets out the case against thinking there was ever a mercantilist economy, or mercantilism – however you define it.

Chapter 2

What mercantilism? Mun vs. Political Arithmetick, 1620-1700

> "By reason of the Dreyning of Fens, watering of dry Grounds, improving of Forrests, and Commons... making some Rivers Navigable, &c. I say it is manifest, that the Land in its present Condition, is able to bear more Provision, and Commodities, than it was forty years ago.
>
> -William Petty (1676 [1691: 96])

Edward Misselden had found a traditionalist space for the economy, but, as this chapter argues, the age of mercantilism, which is supposed to have started with the work of Thomas Mun in the 1620s was anything but mercantilist and did not follow a balance of trade doctrine. There is a rich literature on the 17th century economics of Thomas Mun, William Petty and Gregory King, but it tends to be narrowly focussed on their use of empirics (Stone 1997), their methods (Roncaglia 1985, Magnusson 1994, 1995, Suprinyak 2009a, 2009b) and in some cases national accounting (Studenski 1958). But generally these are overlooked for a grander narrative of mercantilism, suggested by Adam Smith himself (1776, IV, i: 7), which historians of economics since McCulloch (1825) have repeated (e.g. Blaug 1978 and Heckscher 1994, to mention two). According to them, throughout the 17th and 18th century, mercantilism was the common thread in British economic thought, with little to no empirical content.

Unlike these authors, and more akin to Schumpeter (1954) and Magnusson (1995), I argue that the idea of a mercantilist 17th century is a red herring, and instead suggest that the period from 1620 to 1700 used two different definitions of the economy: one shaped by Thomas Mun, the other by Political Arithmetick – neither of which are mercantilist in any way. They were not half-baked theories but influential definitions of the economy, presented to policy makers and based on empirical evidence. The 17th century, like the 18th, as I will argue in the next chapters, was highly empirical, and not dominated by some form of mercantilist thinking – bullionist or otherwise – as Petty illustrates when he talks of "more provisions, and commodities" resulting from

investment in domestic capacity, and not some balance of trade doctrine, traditionalist or otherwise.

First this chapter needs to address the idea of mercantilism, and I will argue that Adam Smith's stereotyping of his predecessors was a useful rhetorical device for convincing his contemporaries. There is a parallel here with John Maynard Keynes (1936) who held up all of his predecessors as 'classical economists' to convince his contemporaries to accept a new definition of the economy - discussed in chapter eight. Like Keynes's followers, Smith's students believed their teacher, and when historians of economics began writing in the 19th century, they started with the premise that the 17th and 18th centuries were mercantilist in England and that the 18th was Physiocratic in France. I will challenge these notions in the next four chapters.

I argue that Thomas Mun, rather than being a balance of trade mercantilist – or bullionist – held a consistent definition of the economy, which he accounted for empirically from the 1620s on. He was controversial in the 1620s because his theory was based on logic and empirics, not traditionalist methods. Moreover, in 1630 Mun defined a domestic economy which would grow through a positive balance of *payments* – not a traditionalist balance of *trade*. Problematically for interpreting Mun's impact, his 1630 work was only published posthumously in 1664. By that point the English government's prime concern was domestic matters following the English civil war (1640-47), not the international trade problems which had concerned Mun. This concern over domestic stability fostered a debate about income inequality and economic growth, as the government needed to keep the population content, so Mun's work may have been overtaken by events, as his work never addressed this issue of distribution.

William Petty's well documented economic proposals and national accounts after 1660 (e.g. Hill 1899 or Roncaglia 1985) were driven by exactly this concern about domestic conditions and the distribution of income. He composed very detailed national accounts for England, defining the economy entirely in terms of its domestic activity. For Petty, the land and labour provided output, which was consumed by the population, who can earn more than they spend and thereby add to the 'national stock'

by investing their surplus. That would in turn raise wealth, which would increase incomes. So where Thomas Mun was concerned with the external balance of payments, Petty and Gregory King (1696) were concerned with the domestic capacity and people's consumption, all of which they argued with empirics. The 17th century was by no means mercantilist, and it was a very exciting time for economic thought.

1. Why mercantilism implies an economy

Mercantilism is generally presented as the theory held by economic thinkers from the 1620s until Adam Smith's 1776 *Wealth of Nations* (Heckscher 1994, Magnusson 1994, 1995). Economists during this period are supposed to have held the unified view that the nation would grow by maximizing the balance of trade surplus while increasing domestic specie holdings (see Blaug 1978, Heckscher 1994 or McClusker 2001). It is worth pausing here, because those same historians explain that in 'pre-economy' or pre-Smith England there were only two ways a country could grow. Either the monarch would conquer new lands or the monarch's wealth and reputation grew. The problem with this story is that the mercantilists are supposed to have spent 150 years focusing on economic growth. But the mercantilists were not conquering new lands or giving money to the king; instead they were adding wealth to something else.

The implication is that the mercantilist must have had a shared definition of the economy. If the nation was not enriched by increasing the monarch's own treasury or by expanding the borders, there must have been something else that was growing – the mercantilist economy. This idea of a mercantilist economy is implied by Viner (1937 [1965: 3-6]) when he separates a bullionist period (1560-1620) from mercantilism post 1620, and logically contradicts Schabas's (2005) and Hoppit's (2006) argument that there was no concept of the economy prior to 1760, and they seem to contradict themselves in turn, as they too subscribe to the idea of mercantilism. The issue I consider in the following sub-sections is whether there was such a mercantilist economy and, if so, who defined it.

It is no accident that the time period of mercantilism is supposed to have run from the 1620s until Adam Smith's *Wealth of Nations* (1776), because it was Smith himself who defined the mercantilist. He argued there was a unified theory of the economy in

Britain, deriving from Thomas Mun's (1630 [1664]) treatise "which however foolish has been adopted by all succeeding writers" (Smith 1776, IV, i: 7). This "mercantile system" (Smith 1776, IV, viii: 1) defined an economy which could only grow through a positive balance of payments – as advocated by Mun (1630 [1664: 34]) – coupled with some form of specie importation as "the wealth of a kingdom has by almost all authors after Mun been considered as consisting in the gold and silver in it" (Smith 1776, IV, i: 7). Smith avoided any mention of Misselden and Malynes, who he would have considered of a scholastic (or traditionalist) persuasion and therefore not proper social scientists – by 18th century standards – and instead focussed on Thomas Mun. Problematically, the description that he offers sounds more like Malynes's (1603, 1622) traditionalist focus on gold, with Misselden's use of the balance of trade, both of which were rejected by Mun.

1.1 Smith's sources, influence and modern critics of mercantilism

Smith cited Thomas Mun as the father of mercantilism and, to show that mercantilist thought was rife throughout the preceding centuries, cited Postlethwayt's *Universal Dictionary* (1757) for statistics and referred to Matthew Decker's (1744a) mercantilist book, written for political purpose with little policy impact, as "an excellent authority" (Smith 1776 VI, v.a: 20). (Decker's book is discussed in chapter five.)

Those who criticised mercantilist-like ideas, such as William Petty in the late 17th century, or the *British Merchant* (1713-21), Gregory King (1696) and Charles Davenant (1695, 1698, 1711) discussed in the next chapter, were neglected by Smith, who said "I have no great faith in political arithmetick" (Smith 1776, IV, v.b: 30), even though these political arithmeticians shaped the economic policies of their age. He even associated King with other mercantilist writers, even though King explicitly followed the political arithmetic of Petty and Davenant. Davenant had even replied to a minor political pamphlet by Pollexfen (1698) which suggested that specie indicated national wealth:

> Gold and Silver are so far from being (as this author [Pollexfen] says) The only Things that deserve the name of Treasury, or the Riches of a Nation. (Davenant 1698b: 16-7)

Davenant, with the other political arithmeticians, argued consistently that the balance of payments, like the balance of trade, was not the driver of economic growth and did not define the economy. Similarly, Smith made no mention of other 18th century economists in the *Wealth of Nations* who explicitly wrote about an economy different from the supposed mercantilists, such as Hooke (1750) and Arthur Young discussed in chapter five. That is despite Young's high profile across Europe as a leading economic thinker, and being a contemporary of Smith's who rejected arguments that focussed on the balance of trade or payments:

> I say nothing here of the balance of trade, that has nothing to do with it, further than being the cause of either nation possessing any specie at all. (Young 1769: 421)

For Young, the balance of trade was only responsible for bringing specie into a nation that could not generate its own. Beyond that the balance of trade had no effect on the economy, because the economy Arthur Young defined in the 1760s had nothing to do with either mercantilism or Smith's own economy. Rashid (1998) even argues that Smith wilfully ignored intellectual competitors and, if he used their material, Smith would intentionally not cite it. Whether that is the case I cannot judge, but neglecting Davenant and Young seems a gross omission in any review of past economic thought and definitions of the economy. But such omissions from the later history of economics were not wholly unintentional. Smith's characterisation of mercantilism was endorsed by the influential nineteenth century economist John Ramsay McCulloch (1856, 1857) who "helped canonize a set of texts that articulated the theoretical position associated with Adam Smith's *Wealth of Nations*" (Poovey 2008: 60). This did, according to Poovey (2008: 64), set "the tone for much of what counted as economic orthodoxy in mid-nineteenth-century Britain."

It was only in the 1930s that Smith's mercantilism was challenged (Viner 1937, Judges 1939). Like Coleman (1969) and Ekelund and Hébert (1990), Judges argues there was no consistent economic doctrine – at all – during the 17th and 18th century. Schumpeter (1954) agrees with Coleman (1969) that there was no single mercantilist school but argues that there were consistent economic theories during what I have called the 'mercantilist age' from 1620 to 1780. I agree with Schumpeter's assessment

that there were consistent economic theories held at the time, and will show that starting with the work of the supposedly founding mercantilist, Thomas Mun, there were several consecutive and dominant definitions of the economy, none of which were described by Smith's mercantilist label.

I hope to provide a counterpoint to the current history of mercantilism or what could be seen as Adam Smith's historical straw man "according to which it was all but sufficient for putting a work out of court to attach to it the slightest tinge of 'mercantilism' " (Schumpeter 1954 [1981: 318]). Smith appears to have held up books that had a mercantilist flavour as part of his attack on, and definition of, economics in the 17th and 18th century. He avoided a proper presentation of the material in order to convince later historians, which was a successful strategy if one reads Blaug (1978), Heckscher (1994) or McClusker (2001), but it is not a defensible position if one reads the work of Thomas Mun, never mind William Petty and the many economists of the 18th century discussed in the following chapters.

2. Thomas Mun and his original economy

One of the reasons Smith singled out Mun as a starting point for economic thinking was that Mun was one of the earliest economic writers who did not apply the traditionalist mode of argument. He had been an advisor to the Treasury during the 1620s crisis and had worked with the Chancellor of the Exchequer to compose the trade accounts used by Misselden and Malynes (Suprinyak 2009a, 2009b). During the crisis, Mun had written his own treatise, but I suspect its language was probably too controversial, and its content too untraditional, for it to be part of polite public discussion, and indeed most histories of economics tend to miss the controversial book (e.g. Samuels, Biddle and Davis 2003, Landreth and Colander 2002, Roncaglia 2005). This is a shame, because *A Discourse of Trade* (1621) is not only a defence of the East India Company's activities: it is the first expression of Mun's ideas, which were anything but mercantilist – and that may be another reason why the work is so rarely cited. As this section will show, Mun's economy was not mercantilist; it was empirical and theoretically consistent.

Unlike his 1620s contemporaries, Mun opened with a first section entitled "Briefe Notes directing to the several parts which are handled" (1621: A3). This provided an

abstract of the book, summarising the main empirical findings, much like a modern academic publication. His opening paragraph furthers his controversial language, if we consider that it is being published under a divine monarch who is supposed to represent the nation personally.

> The Trade of Merchandize is not onely that laudable practice whereby the entercourse of Nations is so worthily performed, but also (as I may terme it) the very *Touchstone* of a kingdomes prosperity. (Mun 1621: 1)

Mun is attacking the basic principle of a "kingdomes prosperity" when he says it comes from the merchant alone and not the king. By prosperity, he is talking of what became the focus of his 1630 book, the "Common-wealth" (Schumpeter 1954, Studenski 1958, Magnusson 1994, 1995).

> All men do know, that the riches or sufficiency of every Kingdome, State or Common-wealth, consisteth in the possession of those things, which are needfull for a civill life. This sufficiency is of two sorts: the one is naturall, and proceedeth of the Territorie it selfe: the other is artificiall, and dependeth on the industry of the Inhabitants. (Mun 1621: 48)

In a nod to Aristotle, Mun invokes the artificial-natural division, but only when it comes to classifying the output that is produced through land or labour, not in a reference to what is controlled by the monarch or deity. His definition of a commonwealth appears to define any large territory or population, including a "Kingdome" or "State" and when discussing Europe's trade with the East he refers to the "Common-wealth of *Christendome*" (1621: 12). According to Mun, a commonwealth was enriched by the possession of goods "needful for a civill life" which were produced domestically or imported from abroad. To afford imports, the nation needed to export, and this was the need that the East India Company served. Mun was careful to note that consumption in and of itself was not beneficial to the nation, because if we

> Yearly brought into this Realme, [goods] for an infinite value; all which as it is most true, that whilest we consume them, they likewise devoure our wealth. (Mun 1621: 7)

Goods were brought in from abroad and when they were consumed, the people reduced the "wealth" of the commonwealth, but they did not consume all imports. Some of them would remain for the long term, making them assets. Mun seems to favour a balance of payments, not balance of trade, approach even in 1621. He argued that the export and import of commodities were balanced out by specie flows, in what we today would refer to as the capital account.

> For if the rule be true, that when the value of our commodities exported doth overbalance the worth of all those forraigne wares which are imported and consumed in this Kingdome, then the remainder of our stocke which is sent forth, must of necessity returne to us in Treasure. (Mun 1621: 26)

Financial flows in the form of specie or treasure balanced out the international account and the country should not be worried about exporting gold, as long as exports of goods "overbalanced" imports. This point is raised by Schumpeter (1954 [1981: 337]) and by Magnusson (1994), to argue that Mun was not a balance of trade mercantilist. They both made that point in relation to Mun's 1630 publication, missing Supple's (1954: 91-2) argument that large parts of Mun's 1630 book derived from his work in 1621.

Mun had made his case for the benefit of exporting specie, and for international trade, through empirics already in 1621. Here Mun (1621: 22-3) shows that the East India Company's exports accounted for "our own money againe; and more, the somme of 394,223*l* 6*s* 8*d* advanced towards the generall stocke of the Kingdome" (1621: 24).[1] The advance paid out in specie brought goods worth more on the European markets, and moreover, the expenses of the East India Company were not reducing the kingdom's wealth, quite the contrary:

> The *East-India* Company shall disburse the greatest part of the sayd somme advances unto his Maiestie for custome and import and also unto the Factors, Officers, and Marriners, for wages, together with the cost of shipping, victuals, Munitions, Assurance and the like; yet all these (the Materialls of shipping onely

[1] I have modified the numbers to make them easier to read, from the original "394223.l.06.s.08.d."

> excepted) are but transmutations, and no consumption, of the Kingdomes stock. (Mun 1621: 24)

The expenditure of the Company only reduced the national wealth when it consumed the materials of shipping, but because there was a national gain in wealth to be had, such a loss should be acceptable. All the Company's other expenditure, on wages, customs and other "Factors" transmuted the kingdom's stock and allowed the commonwealth to grow as each asset – be it human or capital – was retained by the nation and put to work earning profits. Note that Mun allocates part of the wealth to "his Maiestie for custome" but talks of the commonwealth as something much broader. Mun was not confused about the difference between money and treasure either. Money he saw as that which paid for merchandise on the current account.

> For let no man doubt, but that money doth attend Merchandize, for money is the price of wares, and wares are the proper use of money; so that their coherence is unseperable. (Mun 1621: 25)

Treasure was the gold specie which could be imported and exported, and would balance out the balance of payments. Mun would use the terms money and treasure interchangeably when discussing the importation or exportation of specie, because all transactions in 1620s international trade were done with specie, but he was very clear on what money was to the merchant and how the nation would not lose by exporting specie. It is perhaps not surprising that, when Mun's most cited work, *Englands Treasure by Forraign Trade* (1630), was published, he spent an efficient 12 pages (the whole of chapter XIV) attacking, and logically demolishing, Malynes's idea that the nation's wealth was defined by the sum of the amount of specie held and the monarch's wealth. Mun was also dismissive of Misselden's traditionalist argument that the balance of trade was the defining aspect of the economy, because "the exportation of our money in trade of Merchandize is a means to encrease our Treasure" (Mun 1630 [1664: 14]). Perhaps these extended explanations of Misselden and Malynes's shortcomings indicate how little Mun's 1621 treatise was able to affect popular debate. That said, it was a controversial work, and his next book, delayed by some 30 years in publication, would be even more controversial.

2.1 Mun's supposedly mercantilist economy

Mun's most cited work was written in the late 1620s, and is dated 1630, even though it was not published until 1664. Once published it became very popular and was reprinted six times over the next century.[2] Adam Smith pointed to it as the root of mercantilism probably because of its popularity and for its explicit avoidance of scholastic or traditionalist principle, presenting arguments "as briefly as possible I may without obscurity" (Mun 1630 [1664: 48]). Unlike Smith's portrayal of Mun as a trade balance mercantilist, Mun continued his 1621 argument that the economy was defined by domestic activities and the balance of payment, with merchants at the centre:

> The merchant is worthily called *The steward of the Kingdoms Stock*, by ways of commerce with other nations... so the private gain may ever accompany the publique good. (Mun 1630 [1664: I])

The public good was again identified with international trade and the merchants' activities in trading the Kingdom's stock of wealth. Several authors have pointed out that Mun's 1630 arguments were nothing like Smith's description of mercantilism, by focussing instead on Mun's empirics (Stone 1997) or his invention of the balance of payments (Studenski 1958). Here I will instead focus on Mun's economy.

The merchants who enriched the nation contributed to "the King in his customs, and the kingdom in her profits" (Mun 1630 [1664: 36]). But Mun went further as he argued that the prince's wealth was not representative of the private man or the nation. He said that the prince might gain through taxes and excise, but the earnings of the merchants and rest of the kingdom could be small. He suggested that there was an optimal "quantity of treasure which princes may conveniently lay up yearly without hurting the common wealth" (Mun 1630 [1664: 65]). The commonwealth was Mun's term for the economy, and it was the monarch's job to ensure that he did not take too much, so as to avoid that the "life of the lands and arts must fail and fall to the ruin both of the publick and private wealth" (Mun 1630 [1664: 68]).

[2] According to British Library records

The monarch needed to balance his financial needs to provide security with the economic health of the country. In doing so he needed to spend on infrastructure, the army, and the state. Such expenditure should be spent on domestic materials and domestic labour to "maintain the poor with the purse of the rich, which is the best distribution of the common-wealth" (Mun 1630 [1664]).[3] Expenditure should be domestic to avoid unemployment, as Mun argued that unemployment cost the nation potential profits. Those profits could only be realised for Mun through international trade, because domestic expenditure on domestically produced goods or assets was a redistribution of domestic wealth:

> All these in the Kingdoms accompt are but commutations among our selves, and no Privation of the Kingdoms stock... Neither is there less honour and judgment by growing rich (in this manner) upon the stock of other Nations, than by an industrious encrease of our own means... [but] one man's loss becomes another man's gain, it is still in the Kingdome. (Mun 1630 [1664])

So the domestic economy could be profitable, but domestically this would result in a redistribution of the existing wealth. To acquire new national stock, the commonwealth needed to export. As part of the exportation Mun argued that it was important to keep an account "to discover how much we gain or lose by trade" (Mun 1630 [1664]). This account included the export and imports goods in terms of the specie paid out for foreign wares, and the "treasure" or specie earned from exports.

Table 2.1: Thomas Mun's balance of payments, 1630

Exportations	2,200,000
Consumption of foreign wares	2,000,000
Treasure to balance accounts	+ 200,000

Source: Adapted from Mun (1630 [1664: ch. 2, ch. 19])

Given the trade surplus, the commonwealth was earning more specie than it expended. This new specie could be invested or spent domestically, which would

[3] References without page numbers are to the electronic version of Mun (1630 [1664]) available on http://socserv.mcmaster.ca/~econ/ugcm/3ll3/mun/treasure.txt [accessed July 2009]

increase the national stock and wealth. Mun found that a positive trade balance was positive for the commonwealth, but this was not because it benefited the monarch.

> In the course of forraign trade there are three sorts of gain, the first is that of the Commonwealth, which may be done when the Merchant (who is the principal Agent therein) shall lose. The second is the gain of the Merchant which he doth sometimes justly and worthily effect, although the Commonwealth be a loser. The third is the gain of the King, whereof he is ever certain, even when the Commonwealth and the Merchant shall be both losers. (Mun 1630 [1664])

The monarch could gain from international trade, as could the merchant, but in both instances the commonwealth could lose out. Mun had defined an economy where the monarch was not at the centre, but the national stock of assets, the national wealth, took centre stage. Mun worried that the monarch or merchant could profit but not augment the national wealth, and thereby their actions would not be beneficial to the commonwealth. He had formulated this argument in response to the 1620s trade crisis and the East India Company's wish to export specie for investment abroad. Under Mun's definition, such exports would purchase new assets for the nation which would yield a return, so they were a good investment for the commonwealth. Mun's language and approach does not seem to have been very popular. His 1630 text would not be published until 1664. There are many possible reasons for this delay. Firstly, his approach was not traditionalist and instead advocated empirics and brevity rather than elaborate argument and references to authority (Poovey 1998). Secondly, his suggestion that the monarch was not at the epicentre of the economy was probably not very popular in the late 1620s, as the nation recovered from the trade crisis. When it was finally published in 1664, England had deposed a monarch, renamed itself a commonwealth, been ruled by a dictator and then toppled its dictator as well. Not surprisingly perhaps Mun's book was published in a time much less concerned with external trade than the 1620s had been, and more concerned with domestic conditions.

3. Political Arithmetick and empirics

Following the 1640s civil war, Cromwell's fall and the restoration of Charles II in 1660, the royal treasury was empty while the plague and unpopular chimney tax worried the newly installed government. To address the empty treasury and a policy

to promote social calm, Sir William Petty proposed that the chimney tax be replaced by an income tax, set out in clear empirical terms. Under Cromwell, William Petty had been one of the most influential economic thinkers in England. He was a cartographer, scientist and medical man, remembered by many as "the originator of national accounting... [possessed of] a brilliant wit, great practical acumen and unbounded energy" (Stone 1997: 5).[4] But equally, he is remembered as the most "voracious land-shark who ever appeared in Western Europe" (Mitchel 1873: 53). A man who would "propose a plan for the *final solution* of the perennial Irish Question" in Hull's (1899, my emphasis)[5] prophetic use of the term for a pogrom in Ireland since dubbed a national "concentration camp" (Roncaglia 1985: 5, Olson 1993: 61).[6] Petty is remembered in the history of economics as the inventor of political arithmetick and his use of empirics, as stated in his preface:

> The method I take to do this is not very usual; for instead of using only comparative and superlative words, and intellectual arguments, I have taken the course (as a specimen of the Political Arithmetick I have long aimed at) to express myself in Terms of Numbers, Weights, or Measure; to use only arguments of sense, and consider only such causes, as have visible foundations in Nature; leaving those that depend upon the mutable Minds, Opinions, Appetites, and Passions of Particular Men, to the consideration of others. (Petty 1676: preface)

Petty would use "Numbers, Weights, or Measure" to make his tax proposal and estimate the economic health of the nation. Despite his 'concentration camp' ideas for Ireland, Petty's two books on England (1662, 1676) focussed on defining the social interactions related to income, jobs and output. Unlike Maddison's (2007) suggestion that Petty somehow added empirics to balance of trade mercantilism, or perhaps that he empirically fleshed out Mun's ideas, I will argue below that Petty set out a new definition of the economy to address the restored monarchy. As Ekelund and Hébert (1990: 76) argue, Petty's economy was not defined along the lines of any mercantilist

[4] See Goodacre (2004: 13) for a comprehensive list of Petty's "widespread acclaim from historians of economic thought" including Beer (1938), Roll (1938 [1973]), Schumpeter (1954), Letwin (1963), Routh (1975), Hutchison (1988 [1997]), Pressman (1998), Landreth and Colander (2002).
[5] Electronic version, so no page reference
[6] Petty's work on Ireland, where he was responsible for land valuation and redistribution under Cromwell, is controversial. He later proposed that the whole of Ireland be set up as a cattle farm for English consumption, with the population forcefully removed or kept in special camps (Petty 1691)

logic but focussed on achieving "a high level of employment and economic activity, not the accumulation of mere treasure." I therefore present Petty's economy below as a contradiction to both Thomas Mun and balance of trade mercantilism.

3.1 William Petty's fair taxes, 1662

This sub-section outlines how Petty measured and defined the English economy in 1662. His focus on the domestic economy over the international scene sets him apart from Mun, because Petty does not appear even to consider international trade in 1662. Following the civil war, Petty assumed that the common man was living at the subsistence level, where all his income was spent on basic survival at a cost of 4½*d* per day. According to Petty (1662: 3) all gold in circulation was therefore spent on basic necessities. To make his estimates Petty collected and used the hearth tax data, according to Davenant (1695: 78). Petty had access to other datasets and mortality tables through his work with demographer John Graunt (1662), from which Petty extracted his estimate of the quantity, value and yield of land, estates and labour, reproduced in *Table* 2.2:

Table 2.2: William Petty's National Income, 1662

	Quantity	Capital Value	Income
Land (acres)	24,000,000	£ 144,000,000	£ 8,000,000
Personal Estates	...	£ 106,000,000	£ 7,000,000
Labour (people)	3,000,000	£ 417,000,000	£25,000,000
Total		£ 617,000,000	£ 40,000,000

Source: Adapted from Petty (1662: 3)

According to Petty national income was not related to the balance of trade or balance of payments, but derived from capital and labour, which yielded an annual income of forty million pounds. He argued that at subsistence, the average person would spend 4½*d* per day, and so their total expenditure was 6*l* 13*s* 4*d* per annum.[7] With an estimated six million people in England, that added up to £40m in national expenditures; this equalled Petty's national income.

[7] This appears to be a rounded annual expenditure of 1,600*d*, as 4½*d* per day should add up to 1,642*d* per annum (i.e. 6*l* 16*s* 10½*d*). Annual expenditure of £40m adds up with Petty's rounded figures.

Table 2.3: William Petty's first National Account, 1662

Expenditure		Totalling
6 Million People expend for food, housing, clothes and other necessities	6*l* 13*s* 4*d* (4½*d* per diem)	£ 40,000,000
Income		
Rent, Profits and interest on Estates account for		£ 15,000,000
The labour of the people must account for	(40m – 15m)	£ 25,000,000

Source: Adapted from Petty (1662: 7)

"The labour of the people" was a residual account, and because capital (or land and estates) yielded £15m while the total expense was £40m and people were living at subsistence, the difference between income and expenditure had to be £25m. Focusing on the income (and not past wealth) allowed Petty to make an argument for taxation on current income only, and he proposed a flat rate 10% tax on all income earners and all land revenues (Roncaglia 1985). This proposal would raise £4m per annum and therefore be more profitable for the government than the hearth tax, which raised only £1.2m (Hughes 1991). For Petty, the reason that national income and national expenditure equalled each other was not because they were theoretically the same, but because people were living on subsistence and could not afford to save.

Petty does not seem to be interested in the growth of the economy, and while Roncaglia (1985) points out that Petty was concerned with international trade, it did not feature in his account of the nation. Indeed, Petty appears to have considered trade important, in-so-far as it was responsible for bringing specie into the country when exports were sold, but "a surplus on the balance of payments, with the inflow of precious metals which follows as a consequence, was a desirable, but subordinate, objective to a high level of employment and internal production" (Roncaglia 1985: 36). The international trade was subordinate to domestic production, and Petty defined an economy which centred on domestic activity. This is probably because in 1662 he only wanted to make a domestic tax argument, and was saving his discussion of the wider economy for a longer work on England, written in 1676.

3.2 William Petty's Political arithmetick, 1676

It is in *Political Arithmetic* (1676 [1691]) that Petty presents his arguments on the definition of the economy. Again, several authors have commented on this work (Roncaglia 1985, Goodacre 2004), but much of the commentary is on Petty's pioneering empirical effort, or criticism that "Petty's method for estimating national income was simple" (Studenski 1958: 28) while his "arguments could be sharpened up in places" (Stone 1997: 44). While I agree that in 20th century terms, some of Petty's analysis may appear simple, I insist that focussing on Petty's empirics misses a fundamental point: Petty set out a definition of the economy, very alien to the supposed mercantilist economy and different from the traditionalist arguments made before him. This sub-section attempts to elucidate how Petty defined his economy, to show that it continued from the 1662 work and was a radically different vision from that promoted by Mun. The following section considers which of the two approaches was successful at the time.

Petty argued that the productivity and wealth of a nation was not dependent on its sovereign territory or its total population – although the expansion of either was beneficial. National wealth for any given country, he argued, depended on the way land, animals and capital was utilized, and that "One man by art, may do as much work as many without it" (1676 [1691: 2]). His concluding remarks on the improvements in the economy are of a much more qualitative nature than his £40m sum in 1662, as his explicit focus had changed from a tax argument to an estimation and definition of economic growth.

> As for the Land of England, Scotland, and Ireland, as it is not less in quantity, than it was forty years since; so it is manifest that by reason of the Dreyning of Fens, watering of dry Grounds, improving of Forrests, and Commons... making some Rivers Navigable, &c. I say it is manifest, that the Land in its present Condition, is able to bear more Provision, and Commodities, than it was forty years ago. (Petty 1676 [1691: 96])

Investment in capital projects and improvement of the productive capacity led to growth in the available commodities for sale and provisions for consumption. To analyse economic growth, or the growth in national income, Petty placed a premium

on understanding the social make-up of the nation and argued that this should be the base of any national accounting relationship. As Schumpeter (1954) notes, Petty rejected money and relative prices as unifying terms for value, arguing that money could not buy you the same goods or services in different parts of the world. Petty instead defined economic value as "the days food of an adult man, at a medium, and not the days labour" (1676 [1691: 65]). His national income estimates were ultimately valued in the silver equivalent of the purchasing power of food, including the fact that "one days delicate and exquisite food may be worth ten of the ordinary" (1676 [1691: 67]).

As such, Petty attempted to estimate how much labour the average person had to expend in order to have a comfortable lifestyle. Again, he does not explore the issues of foreign trade but dedicates a whole chapter to explaining that there is "mony sufficient to drive the trade of the nation" (Petty 1676b: ch. 9).[8] By trade, Petty was in fact discussing the domestic economy and how specie drove trade, but there was more than sufficient gold in the realm to do so.

> The whole Cash of England was then about six Millions, which I conceive is sufficient to drive the Trade of England, not doubting but the rest of his Majesties Dominions have the like means to do the same respectively. If there be six Millions of Souls in England, and that each spendeth 7 l. per annum, then the whole expence is forty two Millions, or about eight hundred thousand pound per week; and consequently, if every Man did pay his expence weekly, and that the Money could circulate within the compass of a Week, then less than one Million would answer the ends proposed. (Petty 1676b)

Here Petty argues that the national expenditure does not require 42 million pounds worth of specie. Instead money will "circulate," and if the velocity of money is high enough where everyone is paid weekly, then only £800,000 worth of specie is required to drive the domestic economy. Petty has updated his national expenditure to £42m from the 1662 estimate of £40m. With the same population estimate as in 1662, of six million, he calculates an annual expenditure of £7 per capita.

[8] Petty (1676b) is a digital copy of *Political Arithmetick*; see bibliographic notes for details.

Labour could extract value and income from land and capital, but to account for it, one needed more than the sales price. It was the circumstances around labour activities in both producing and consuming which defined how well the country was doing. The problem was that such statistics were not available to Petty in 1676, and are probably still not available in full to the Office for National Statistics today. Petty sought to measure the national income through a set of equations which gave relationships between "art and simple labour... art and opinion" and most other social relations (1676 [1691: 66]).[9] The point was that labour could be improved, and investment in labour quality was a rational expenditure.

> If by such simple labour I could dig and prepare for Seed a hundred acres in a thousand days; Suppose then I spend a hundred days in studying a more compendious way, and in contriving tools for the same purpose; but in all that hundred days dig nothing, but in the remaining nine hundred days I dig 200 acres of Ground; then I say, that the said Art which cost but one hundred days Inventing is worth one mans labour for ever. (Petty 1676 [1691: 66])

Labour productivity could be improved, and the cost of education and innovation, if they led to higher output, should be considered a prudent investment. But income was what really mattered, because it was from the national income that the national wealth would grow. The national wealth, in turn, was the nation's capital from which incomes derived, and capital included both land and labour as in the 1662 account. How this would happen became clear when Petty referred to Wilson's (1600 [1972]) figures on Norwich, and their potential for superlucration.

Now, the Oxford English Dictionary[10] suggests that superlucration in the 17th and 18th centuries meant profit. For Petty, superlucration was indeed a reference to income being higher than expenditure and this could be carried over onto a national level if everyone earned more than they spent. In the case of Norwich, and Wilson's figures, it was found that children "do earn 1200 l. per annum, more than they spend" (Petty

[9] Petty (1676 [1691: 67]) suggested a number of relationships, where "an equation may be made between drudging labour, and favour, Acquaintance, interest, friends, eloquence, reputation, power, authority, etc. All which I thought not amiss to intimate as of the same kind with finding an equation Between Land and Labour."
[10] Available on-line through http://www.oed.com; article: "superlucration." [accessed June 2010].

1676b: ch.8). Multiplying this income by the young population of Norwich and the extrapolating for the whole population "it follows that all his Majesties Subjects, between six and sixteen years old, might earn five Millions per annum more than they spend" (Petty 1676b: ch.8). If men between the ages of 16 and 64 earned twice as much in a day, and there were twice as many – according to the hearth tax rolls – the working age men could then earn £20m more than they spent per annum. In this scenario English national income would be £25m higher than the expenditure, and this surplus was now available to invest in land and labour:

> Although as hath been proved, the People of England do thrive, and that it is possible they might Superlucrate twenty five Millions per annum; yet it is manifest that they do not, nor twenty three, which is less by the two Millions herein meant; for if they did Superlucrate twenty three Millions, then in about five or six years time, the whole Stock, and Personal Estate of the Nation would be doubled. (Petty 1676b: ch.8)

The whole national stock and the personal estates could be doubled relatively quickly if such superlucration were to occur. In a second book on Ireland, Petty explained that such capital investment could include "planting 3 millions of timber-trees... Fortifying the city of Dublin... Making several rivers navigable and mending high ways" (Petty 1691: 16). For Petty, superlucration was an expression of personal profits which could be aggregated up as the national profits to be re-invested. The economy grew by investing these savings in domestic capital projects and increasing the productivity of land and labour. Based on this, Studenski (1958: 13) similarly concluded that Petty offered "the broad proposition that 'where a people thrive, there the income is greater than the expense', and where that income is greater than the expense, there would be superlucration." By superlucration, Petty, like his followers Gregory King and Charles Davenant discussed in the next chapter, was not referring to an equivalent of modern 'profits', as suggested by the Oxford English Dictionary, which cites Petty as the source of the term. Rather Petty referred to the profits available for re-investment at the national scale in his discussion of national income, national expenditure and national wealth. For Petty's economy to grow, national income had to be higher than national expenditure, because that lead to investment in national wealth.

3.3 Petty's economy becomes the blueprint for later work

Petty's economy became the blueprint for the work of Gregory King and Charles Davenant, who would take political arithmetic forward in the early 18th century. Petty's economy focussed on the domestic, and while international trade could contribute to the economy, it was seen as a vent for excess production (Roncaglia 1985). Wealth was accumulated through domestic production, and consumption derived from that wealth, but it was the consumption that defined the national income. Where Petty counted consumption as the income of the nation, with a possibility to generate more by adding to the national stock of capital, Mun only focussed on expanding the stock of national wealth, as consumption would reduce this wealth. For Petty, the ability to augment the national wealth was measured by the difference between national income and national expenditure, which he called superlucration. This is well illustrated in King's national account, based on Petty's ideas, reproduced in *Table* 2.4:

Table 2.4: Gregory King's National Account and superlucration, 1688

	£
Expense of the Nation	41,700,000
Increase in Wealth	1,800,000
	43,500,000
Yearly rent	10,000,000
Housing	2,000,000
Of all other hereditaments	1,000,000
	13,000,000
That the yearly Produce of the trade and arts were about	30,500,000
	43,500,000

Source: King (1696 [1802: 30])

King, who followed Petty's economy, estimated that the national income of England in 1688 was £43.5m. That income came from rent, housing and "hereditaments" or inherited lands and buildings, while the annual production was worth £30.5m. The national expense was £41.7m and the difference between the two was what King described as the "Increase in wealth" or what was available to be invested into capital, Petty's superlucration. To make clear that income and wealth were two separate

issues, King also provided an account for the national wealth, reproduced in *Table* 2.5:

Table 2.5: Gregory King's value of the kingdom, 1688

Value of the kingdome:	£
13 millions of rents at 18 years purchase	234,000,000
30½ millions per annum by trade and arts, at near 11 years purchase	330,000,000
The Stock of Kingdoms Mony, Plate Jewels and household goods	28,000,000
Shipping, Forts, Ammunition, Stores, Goods, Wares, Provisions etc.	33,000,000
Livestock of the Kingdom in Cattle, Beasts, Fowl etc.	25,000,000
In all	650,000,000

Source: King (1696 [1802: 32])

The "Value of the Kingdome" adds the stocks of precious metal, be they in specie "Mony" or in plate, as well as other capital goods such as household goods, wares, provisions etc. It includes what King and Petty considered important national assets such as forts, ammunition, and items important for the sea trade such as shipping tonnage or the provisions which were part of the national productive and security assets, as well as the livestock.

Land yielded a rent, but to put a value on the land itself, King applied the number of "years purchase" to get an estimate. This was a common method at the time, where land was valued by the forward expected returns. So the purchase value of land was found by multiplying the annual yield by the number of years purchase established by the buyer and seller, in this case 18 years at £13m yield which equals £234m. Doing the same for the £30.5m national output, King values what we might consider human capital and fixed capital by its output. The point remains that King was very clear about the difference between wealth and income, as was Petty, and they both shared the idea that the difference between national income and national expenditure equalled the superlucration which could be invested in new capital goods. The economy Petty had defined would continue to evolve with King's and Charles Davenant's work in the first decades of the 18th century. This economy had nothing to do with mercantilism and everything to do with domestic production, the national stock and empirics.

4. The economy in the heyday of 'mercantilism'

So how was the mercantilist economy defined? Adam Smith successfully inserted the notion that there were mercantilists who followed Thomas Mun from 1630 to 1776. They were supposed to believe that the gold holdings in a nation defined wealth and that the balance of trade surplus which brought in specie represented growth (Blaug 1978). By arguing that there were two explicit theories of the economy in the 17th century, I hope that this chapter adds to the literature contradicting the idea of mercantilism (Schumpeter 1954, Magnusson 1994, 1995). But unlike Coleman (1969), who argues there were no consistent economic theories throughout the pre-classical age, I argue that from Mun's first work in 1621 to Petty's last posthumous publication in 1691, two consistent theories of the economy were proposed. Those economies were measured for policy purposes, and they were not mercantilist.

I accept the argument that, prior to 1776, some authors held mercantilist-like ideas and focussed on the balance of trade, specie circulation or the royal treasury. But the narrative of mercantilism presented by Blaug (1978), Heckscher (1994), and McClusker (2001) where the pre-classical period was dominated by a mercantilist economy is because of Adam Smith's presentation of the past. Smith only alluded to Thomas Mun's work and avoided the majority of Petty's, but by investigating how these policy advisors and economic thinkers of the 17th century defined the economy, there is no evidence to suggest they subscribed to mercantilism as described by Smith and the literature. Indeed, as the following chapters will illustrate, those economists who had ideas similar to what is usually called bullionist mercantilism, like Pollexfen (1697a, 1697b) or Decker (1744a) – held up as good examples of mercantilism in the 17th and 18th century – wrote long after the glorious revolution of 1688 and were not influential policy advisors or economic thinkers. Citing these later authors to define a period of mercantilism from 1630 to 1776 does not appear defensible to me. Neither does Smith's characterisation of Thomas Mun's work, which has caused further stereotyping of this age as unempirical and mercantilist.

Regarding the years from 1630 to 1775, I would suggest we use the term 'mercantilist age' much as the period from 1776 to the 1880s is known as the 'classical age' in the history of economics. Both periods had theoretical differences and both periods used

empirics to argue about economics, as I have shown for Mun and Petty, and indeed Wilson, Malynes and Misselden. An important difference between the classical and mercantilist age, as I will argue in chapter seven, is that the classical age shared a common definition of the economy, whereas the mercantilist age had a number of changing definitions.

Whether one accepts my argument that we can speak of a theoretically diverse mercantilist age, or even if mercantilism is supposed to dominate from 1630 to 1690, both readings of history imply that the concept of an autonomous economy existed in the 17th century. With bullionist mercantilism, the nation grows by adding gold to the nation's stocks, which means that something other than the monarch's wealth or the nation's territory define growth. This contradicts the argument by Schabas (2005) and Hoppit (2006) that there was no concept of the economy prior to 1776. I have aimed to show that policy advisors worked within the framework of an economy which they defined in a non-mercantilist manner and used empirics to measure it.

But who offered the dominant definition of the economy in the 17th century? Thomas Mun was an important policy maker during the 1620s and had made heavy use of empirics for the then Chancellor (Suprinyak 2009a, 2009b), and also in his own work (Mun 1621, 1630 [1664]). He defined an economy which accumulated wealth and consumed that wealth as part of people's survival. Economic growth happened by generating more wealth than was consumed, and the preferred route for doing so was through the international markets. His non-traditionalist approach was probably too controversial in the 1620s to be part of the parliamentary debate, and his strong rejection of Malynes in the 1630 manuscript indicates that Mun's 1621 book was not successful in shifting opinion. But the 1630 work remained unpublished until 1664 and was only released after the civil war and the restoration of the monarchy. I suggest Mun's work was influential, as it was re-published 6 times in England over the next century, and it must still have been in popular circulation in Adam Smith's time. But Mun passed away in 1641, and his work was published in a time that had moved on and was worried about distribution and domestic conditions after the civil war, not the trade crisis of the 1620s.

Petty and other late 17th century authors argued that a fairer distribution of the tax burden, as in Petty's 1662 proposal, or a fairer distribution of income, was preferable in economic matters. Partly that was to appease an uneasy public, and it addressed a country that had seen twenty years of civil war and changes of government. Joshua Child, England's richest man for parts of the 17th century, argued that it was preferable to have 300 people earn £100, than for 100 people to earn £300 (Child 1693: 114). The aggregate result is of course the same, but unlike Thomas Mun, Child, like Petty and other writers after 1640, worried about distribution.

Petty, who had been an influential policy maker under Cromwell, was a sophisticated political operator who understood the needs of Cromwell's Commonwealth and later the restored Monarchy (Roncaglia 1985, Goodacre 2004). In proposing the income tax in 1662, and in *Political Arithmetick* (1676), he emphasised the benefits to the nation, the benefits to the re-instated monarch and distributive fairness. A problem with arguing that Petty's economy was influential in the mid-17th century is that both Petty's and King's work remained censored until after the 1690s. As Petty's son wrote in the dedication to the first edition of *Political Arithmetick* (1676), published in 1691:

> *I presume to offer, what my Father long since writ, to shew the* weight *and* importance *of the* English Crown. It was by him stiled Political Arithmetick, in as much as things of Government, and of no less concern and extent, than the Glory of the Prince, and the happiness and greatness of the People, are by the Ordinary Rules of Arithmetick, brought into a sort of Demonstration. He was allowed by all, to be the Inventor of this Method of Instruction; where the perplexed and intricate ways of the World, are explain'd by a very mean piece of Science; and had not the Doctrins of this Essay offended France, they had long since seen the light, and had found Followers, as well as improvements before this time, to the advantage perhaps of Mankind.
> (Shelborne Petty, in Petty 1676 [1691: dedication])

In 1691 Petty's son emphasised his father's focus on "the happiness and greatness of the People" which was even more important after the Glorious Revolution of 1688, which saw a bloodless coup in England. The work itself had been delayed as the English censors worried that the text would insult the French, and Gregory King's follow-on work in 1696 was delayed to avoid revealing to the French how the English

nation and military were doing. So how much influence can Petty's work have had? The reality, according to Roncaglia (1985, 2005) and most historians of economics, is that Petty was never able to convince parliament to adopt his policy advice for England after Cromwell's fall. His association with Cromwell and the land holdings he had acquired as a "land-shark" in Ireland (Mitchel 1873: 53) led to parliament prosecuting him for treason rather than consider his economic treatise (Samuels, Biddle and Davis 2003 and Roncaglia 2005).

Mun was definitely not ignored within government in the 1620s, but we have 'only' Adam Smith's word for the fact that everyone followed Mun's doctrines once they were published in 1664 – even if they differed greatly from what Smith described. The popularity of Mun's book and the unavailability of Petty's work, combined with Petty's negative reputation, suggest to me that Mun probably represented an accepted definition of the economy in England between 1660 and the 1690s. According to Hoppit (1996b: 516) this period is supposed to have been the "golden age of political arithmetic," but neither Petty nor King were influential, and Davenant had yet to publish his first book. I agree with Hoppit's implicit argument that *empirics* were influential, but they were Mun's empirics, and indeed the empirics of balance of payments, not political arithmetic. As I will argue in the next chapter, the real golden period of political arithmetic was the three decades from 1690 to 1720, when policy makers were guided by an economy set out and measured by a political arithmetician, assisted by the civil service he was training, to be implemented by a new queen of whom he was a favourite, in the parliament to which he was thrice elected.

Of course, none of this is supposed to have happened, according to Adam Smith and several histories of economics, but mercantilism is meant to have dominated all discourse from 1630 to 1776, and Mun is supposed to have laid down its doctrines. I hope to have shown this mercantilist narrative should be challenged. As the next three chapters show, there was a rich empirical and theoretical economics debate in England, not only in the 17th century, but throughout the 18th century – all of which stands in stark contrast to anything resembling a mercantilist economy. The debate revolved around what defined the economy and how one could measure it.

Chapter 3

The real 'golden age' of empirics and political arithmetick, 1695-1720

> By annual income, we mean the whole that arises in any Country, from Land and its Product; from Foreign Trade, and Domestick Business, as Arts, Manufactures &c... And where the Annual Income exceeds the Expence there is a Superlucration arising, which may be call'd National Wealth or National Stock.
>
> -Charles Davenant (1698a: 195)

William Petty died an old, very wealthy, but ultimately ignored man. His political arithmetick had only been adopted by Gregory King and Charles Davenant, seemingly ending the golden age of empirics before it could even start. The consensus in the literature since some of the earliest historians of economics is that "King and Davenant added nothing to political arithmetic after 1699, and there was no further progress in the eighteenth century" (Maddison 2007: 287, or Giffen 1889).[11] Moreover, the empirical interest that Petty and King had shown is supposed to have been lost and only "resumed at the end of the eighteenth century, although the British Government had not collected numerical information in a theoretically informed way for most of that century" (Poovey 1998: 4). All in all, the first three quarters of the 18th century is referred to as a "period of neglect" by historians of economic theory and empirics (Studenski 1958: 40). I disagree with such an assessment and will present evidence over the next three chapters of how the 18th century was a truly empirical age with deep government consideration of what the economy was. This matters because it restores some 80 years of missing history but more importantly because it shows how economists and government redefine the economy depending on social circumstance, and they can do so very quickly.

I suspect the reason that other histories have missed this period out is because they tend to look for the contribution of scholars to a broader discourse on economics. But in the 18th century the policy debate and economic discourse was not taking place

[11] Giffen noted four estimates of national income in the 18th century, but could "find no good estimates of income and capital properly comparable with those already described [by Petty and King] until we come to the close of the last and beginning of the present [19th] century" (1889: 85).

between academics or scholars. Following the Glorious Revolution of 1688, power was being concentrated within government, and policy was being proposed and implemented by the emerging civil service. The economic discourse of the time took place between civil servants and the government, which shifted from the crown to parliament between 1700 and 1750. To understand the dominant view of the economy we need to understand what the government wanted and how it put its arguments across. Academic discourse, as I will argue in chapter five, remained almost irrelevant to the debate on economic matters until the 1760s. So we should not look to academics or scholars for influential economic debate in the early 1700s, because they were not influential. Parliament assumed an independent hold on economic policy making in the 1720s and, as I will argue in chapter four, it did so with an explicit theory of what the economy was, with rich empirical accounts to back that up.

For the moment, and in this chapter, I consider the 1690s, when the Glorious Revolution had just ended and the monarchy and parliament were finding a power balance for economic policy making. This chapter shows that one of Petty's followers, Charles Davenant, was at the centre of that new power balance, first in parliament and then in the civil service where he helped establish theoretical and empirical accounts of the economy. I detail Davenant's contribution, and I want to highlight the point that, as power shifted from the crown to parliament, the most important part of any argument about economic policy was empirical. I argue that Davenant's empirics and theory of the economy dominated the policy discourse from his first empirical account in 1695, until around 1720, a few years after his death.

I build on Magnusson's (1994, 1995) observation that Davenant had a theory of economic growth which did not correspond exactly to Petty's and King's economy and was nothing like the supposed mercantilist economy. Despite this, Magnusson suggests that Davenant had not written much of a purely economic nature, a point this chapter contradicts explicitly. I try to take Davenant away from his "modest but relatively secure place in the history of economic thought" (Hume 1974: 464) as a good administrator (Buck 1982), extrapolator of data (Studenski 1958), "competent publicist" (Waddell 1958: 288) or independent data collector (Clark 1938: 13, Coombs 1957). Instead I want to portray him as what he was: A central part of the

new form of governance with a definition of the economy that dominated policy thinking due to its empirical content and political position. To do so, it is necessary first to understand Davenant's position in the changing power structure at the time and then to consider his consistent theory of the economy and the national accounts he constructed.

1. Charles Davenant and his work

Because academic work had little sway over policy in the 1690s, I need to place Davenant firmly in the establishment and within the corridors of power, before considering his contribution. As Petty learned the hard way, being a royal favourite was good only as long as your patron was in power, but independent submissions to parliament carried little weight, no matter the submitter. Davenant was both academically trained, having attended Balliol College, and a royal favourite of Queen Anne and Chancellor Godolphin (Waddell 1958). This is probably why he is often mentioned in the history of economics, but it is his government positions that are important here: He was elected for parliament thrice (Schumpeter 1954 [2006: 203]) and went from being a commissioner at the Duty and Excise Office (Keblewhite 1698) to becoming Inspector General of imports and exports from 1703 until Queen Anne's terminal illness in 1713 (Davenant 1712a: 51), at a time when the Excise Office was the key tax office. This means he understood the function of parliament and was the senior policy advisor in the state system that was responsible for the majority of government revenue.

Davenant's work at the Excise Office involved both the management of collecting statistics and the training of new commissioners. In this role Davenant insisted on creating an independent excise office with objective data collection, because any statesman should avoid analysis by "projectors, his flatterers or admirers, or those who depend upon him" (Davenant 1698a: 13). Today historians accept that Davenant's ambitious goal of independence succeeded, as Buck (1982: 31) remarks: "Of all the bureaus [sic] of the British state, the Excise was the most bureaucratic and self-contained," meaning it was free of outside influences. It remained so throughout the 18th century as the excise-men were salaried officials, who were specialised civil servants, never working in their home districts, and as a result were almost incorruptible (Torrance 1978).

Davenant focussed on statistics because he considered himself as extending and continuing the political arithmetic pioneered by William Petty (Davenant 1698a: 2). He complained that Petty's data were "very faulty and imperfect, [but] Mr. Gregory King, by his general Knowledg in Politickal Arithmetick has so corrected these" (Davenant 1698a: 17). Through King's corrections, Davenant felt he had access to the most precise statistics on political arithmetic in the world at the time, and

> The Writer of these papers [Davenant], is desirous to take this occasion of owning himself oblig'd to that wonderful Genius and Master in the arts of Computing [King], for many lights and informations. (Davenant 1698a: 17)

Taking the trouble to cite King explicitly – a practice not required at the time – indicates closeness between the two and would have been controversial because King's own book had been suppressed for fear of it being overly revealing and inflammatory towards the French (Studenski 1958: 29).

So Davenant was statistically aware and theoretically driven. His first book was published in 1695, the same year as his unpublished *Memorial concerning the Coyn of England* was commissioned by the Lords Justices and read to the Privy Council (Waddell 1958: 281). This indicates the kind of influence the ex-commissioner held, and his new book, *An essay upon the Ways and Means of supplying the war* (1695), would have had a similar readership, as it was written to address England's policy needs in relation to the War of the Grand Alliance (1688-1697).[12] Davenant argued that 'modern' warfare was different from past conflicts like Tamerlane's Ottoman Takeover (1336-1405). Where past conflicts were lost for "want of virtue" (1695: 4) modern times meant that "the whole art of War is in a manner reduced to Money" (1695: 27). Therefore it was important to understand how the government could raise funds, and from where such funds originated – the economy.

[12] Also referred to as the Nine Years War' or the War of the League of Augsburg: It was fought by an Alliance of England, The Holy Roman Empire, Spain, Netherlands, Savoy, Sweden and Portugal against France and Irish Jacobites, in an attempt to curtail French Domination in Europe.

In particular, the current tax system was insufficient for raising the funds required to wage the War of the Great Alliance. The underlying problem, according to Davenant, was not the tax itself but the way policymakers understood the economy. At the time, taxes were restricted to land and customs excise, but these "are about a third part of the strength of England" (Davenant 1695: 122). In making his tax proposal, Davenant therefore explicitly defined the strength of England, or the economy, and the wealth on which government could levy taxes.

1.1 Davenant's 1695 war economy:

> The wealth of a Country now is the Balance, which arises from the Exchange with other places, of its Natural or Artificial Product... [Where] The Natural Product are the Fruits of the Earth; the Artificial are the Manufactures.
> (Davenant 1695: 20, 21)

Trade was a vital part of the economy for the commissioner of the Excise Office, and a metric for estimating economic growth was the balance of payments surplus or deficit, which could measure how much profit the country was making. Davenant's argument here is an extension of Mun's (1630 [1664]) focus on the net result of the balance of payments, as "Tis not enough to have a great Exportation and Great Importation, unless we are gainers upon the Balance; which the Nation cannot be at the foot of the Accompt" (Davenant 1695: 28). Davenant's economy immediately distinguished itself from Petty's (1662, 1676) and King's (1696 [1801]) by looking to the international dimension. Davenant mentioned trade first because he worried that policy makers favoured the easy imposition of taxes on imports and exports. Magnusson (1995) points out that for Davenant the balance of payments (not the trade balance) was only a starting point for thinking about the domestic economy more broadly. Exports were not so much a driver of the economy but, as Petty had suggested, a vent for excess production (Roncaglia 1985). So "if export was carried out, the amount of manufactured goods could be increased and give rise to more wealth (value-added production) and employment" (Magnusson 1995: 34). Davenant argued that trade was a part of the economy, and the profits which arose from international trade were a net income to the country, but the driver was domestic:

> If all the hands in the Kingdom that are able, were employed in useful labour, our manufactures would so increase, that the Common-wealth would be thereby greatly inriched. (Davenant 1695: 142)

It was domestic production that drove, and defined, the common-wealth. What Davenant meant by "useful" labour is not clearly defined, although when he sets out his national account it includes "income from domestic activities" which he lists as "sciences… arts… labour… industry… manufacture… retailing of foreign goods… [and] the buying and selling of home commodities" (Davenant 1695: 121). While "arts" refers to artisans, the inclusion of science, labour and the domestic merchants indicates that Davenant was thinking of both the manufacturing sector and the service sector as contributing to the commonwealth, or economy.

Like Petty and King, Davenant did not have a full set of income data to base his calculations on, but he did use a comprehensive overview of the national tax revenue (Davenant 1695: 72-73). Instead of income, he tried to estimate the expenditure of the average Englishman to arrive at a national expenditure total. With an estimated 7 million people, and the average cost of subsistence at £7 per annum per person, based on the "Hearth Money" data collected by Petty (Davenant 1695: 78), Davenant calculated that the population of England needed to spend £49m per annum to subsist. The idea of subsistence is important, because Davenant assumed that people would be living close to subsistence due to the war – similar to Petty's assumption in 1662. Therefore the income of the people should equal their expenditure, but this was not the case in peace time (Davenant 1698a). Given that the balance of payments was in surplus of six million pounds, and the income of London, based on the excise office's data, was ten million pounds, the people of England earned £16m from land and international trade. To subsist they needed £49m, so the residual, argued Davenant, had to come from domestic activities, be they science, manufacturing or domestic trading, as illustrated in *Table* 3.1:

Table 3.1: Davenant's 1695 War Economy

	£
Spent in London on rents and aids	10 m
From the balance of payments	6 m
Income from domestic activities (residual)	33 m
	49 m

Source: Davenant (1695: 121)

Domestic activities at subsistence had to account for an income of £33m across the country, because otherwise the people could not subsist. Davenant's argument that current taxes on land and international trade only covered one third of economic activity makes sense, because he defined the economy as the aggregate of international trade, land revenues and domestic activity. Changing the tax system to bring the remaining £33m under government taxation should therefore raise government income and help fund the war. Davenant's economy seems to be a hybrid of Mun and Petty, a combination of the international and domestic for a time of war.

1.2 Promoting Growth in 1695

Davenant noted that the number of poor and unemployed people had increased since Charles II's reign (1660-1685) and blamed this on the "great Decay in our Foreign Trade, and Home Manufacture" not just the balance of payment (Davenant 1695: 141). This decay had been caused by the war effort and trade embargoes imposed by France's allies. To counter this, the government should encourage domestic employment in the "useful" industries, as the poor were not intrinsically different from the rich and wealthy. If they were offered jobs with a settled wage rate "they would be glad to quit that Nastiness which attends a begging and Lazy Life" and become productive members of society, enriching the common-wealth (Davenant 1695: 143). So the useful labour was really any labour that could be brought to bear with a wage.

He went further and encouraged a policy of immigration, in particular the immigration of either skilled labour or migrants willing to work. Davenant reasoned that a small nation with a large population would have more "Invention, Frugality and Industry", as people had to innovate to survive, and with more work, more "power and riches" would accrue to England (Davenant 1695: 144). Immigration brought wealth to the country in the shape of an immigrant's assets, money and goods and the intrinsic

wealth embodied in the immigrant's education, training and abilities. So the government should not discriminate on the basis of nationality but offer "the same protection, and the same laws, [which] will give foreigners the same interests, with the natives" (Davenant 1695: 147-8). More controversially for his time, Davenant even discouraged discrimination based on religion

> Others believe, that Tolerating all Religions may be hurtful to the Church. But these Opinions proceed from a narrowness of Mind, not becoming Religious and Wise Men. For God can protect his own Cause in the middle of a Thousand Errors, and varieties of Heresies will but give our Church-Men a more ample field of shewing their learning and Piety. (Davenant 1695: 147)

Despite suggestions that the early 18th century was mercantilist (e.g. Blaug 1978) or deistic (as in Schabas 2005) Davenant argued that anything which brought more people who wanted to work was positive. This was regardless of race and creed as everyone responded equally to incentives, and all work added to the income of the nation. Through this enrichment, domestic activities would grow, and the trade be expanded. In sum "People are the real Strength and Riches of a country" because labour which produces goods and services that result in income add to the economy (Davenant 1695: 144).

2. Davenant sets out his economic "doctrine"

While Davenant's work in 1695 had been a response to the war, and the Lord Justices, he re-joined parliament in 1698 and publicly released two volumes on how to manage the economy in what was now peace-time England. *Discourses on the Publick Revenue and on the Trade of England* (1698) is, according to Davenant's biographer, "his main contribution to economic doctrine" (Waddell 1958: 283), unlike Magnusson's suggestion that Davenant did not "publish a work on trade which had a more principle [sic] or theoretical aim" than political commentary (Magnusson 1995: 32). Magnusson agrees that Davenant could not be associated with anything called mercantilism and indeed Davenant's new and influential books contained a dedicated rebuttal of a mercantilist position. A fellow Member of Parliament, John Pollexfen, criticised Davenant's 1695 book, and suggested that the flow of specie was what

mattered to the English economy (Pollexfen 1697). Davenant set out a clear criticism of Pollexfen's specie argument:

> We could never have accumulated the Mass of Wealth which shall by and by be shown was once in this nation, unless we had been inrich'd by some other dealing, besides the Exchange and Barter, of our own Commodities, for the Product, of foreign countries. (Davenant 1698b: 4-5)

I think it is hard to state more clearly an opposition to the supposedly dominant doctrine of mercantilism which Magnusson (1994, 1995) debates, and Heckscher (1994) and McClusker (2001) promote. But Davenant persists.

> Gold and Silver are so far from being (as this author [Pollexfen] says) *The only Things that deserve the name of Treasury, or the Riches of a Nation*… [I] shall therefore endeavour to define what may properly be termed the Riches of the Nation. (Davenant 1698b: 16-7)

For Davenant the trade in specie clearly did not represent the wealth of the nation. This point refutes the connection between mercantilism and Davenant foisted upon him by Beer (1938) or Adam Smith who lumped Pollexfen and Davenant together as economists he "affected to despise because of their 'mercantilist errors' " (Schumpeter 1954 [2006: 179]). Instead of specie, and consistent with his 1695 book, Davenant argued that "the Wealth of Nations, arises from the Labour and Industry of the People" (1698a: 17). I think it is hard to state more clearly the supposedly dominant doctrine of mercantilism which Magnusson (1994, 1995) so derides, and Heckscher (1994) and McClusker (2001) promote. Davenant was not a mercantilist, but had a much broader view of the economy, continued from his 1695 book.

The suggestion that mercantilism was the dominant doctrine during the late 1690s, and that Pollexfen's work is an indication of this, needs to consider Pollexfen's own situation. The entire publication record of the Right Honourable John Pollexfen Bastard[13], MP for Devon, includes the single book criticised by Davenant, with a

[13] Apparently the Bastard line of Kitley have been land owners in Devonshire since the Norman Conquest (1066), and family members are referred to as Mr. or Mrs. Bastard in Burke's *History of the*

second volume indicating the author's name. Pollexfen presented no empirics, and his parliamentary career does not seem to have had much impact on policy or politics, whereas Davenant would be made the head of the duty & excise office, contributed to the Privy Council and was part of Queen Anne's coterie (Waddell 1958). Of the two, Davenant's work seems the more important and influential.

Davenant maintained his definition of the economy from 1695 but changed his mind on the wisdom of a sales tax. Rather, he suggested that prices should be free of taxes (Davenant 1698a: 254) as a sales tax would increase the price, and thereby reduce domestic demand for goods and services. This early version of today's 'law of demand' is often seen as one of Davenant's seminal early contribution to economic theory (Heberton Evans 1967) although some controversy persists as to whether it was Gregory King or Davenant who developed it (Endres 1987).

In 1698 Davenant no longer assumed the population were living close to subsistence. He argued that peace allowed incomes to rise beyond what was immediately necessary for subsistence, and a surplus of income over expenditure could therefore persist, which Davenant, like Petty and King before him, called superlucration:

> By annual income, we mean the whole that arises in any Country, from Land and its Product; from Foreign Trade, and Domestick Business, as Arts, Manufactures &c. And by Annual Expence, we understand what is of necessity consum'd to Cloath and Feed the People, or what is requisite for their Defence, in time of War, or for their Ornament in time of Peace. And where the Annual Income exceeds the Expence there is a Superlucration arising, which may be call'd National Wealth or National Stock. (Davenant 1698a: 195)

National income was still derived from all the employment available domestically, plus or minus the balance of payments, and the rents available on land. National expense was the cost of living. The difference between the two, possible in times of peace, was superlucration. This was the money available after all expenditure had been covered nationally, which could be invested in capital. National wealth was

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Commoners of Great Britain and Ireland (1836: 17), the 19th century equivalent of *Who's Who*. Common courtesy by Davenant presumably restricted him to refer to Mr. Bastard as Mr. Pollexfen.

therefore created by accumulating capital in the form of buildings, ships, land improvement, stocks, fleets, naval stores, all of which "which maintains the Prince, and the general Body of his People, in Plenty, Ease and Safety" (Davenant 1698b: 60). On top of this, the "value of a nation" was improved through skills, arts, productivity and knowledge (Davenant 1698b: 61). The national stock mattered for the nation, particularly those relating to the army, navy, housing, raw materials and even luxuries, as they indicated a wealthy society (Davenant 1698b: 41). In modern terms we might think of superlucration as investment. It is the wealth left over after all consumption has taken place, and it is expended nationally on creating assets.

During war a country should expend its national stock to defend its population, but during peace it was essential that a country did not keep specie locked away as "dead treasure" (1698a: 218), but invested in productive capacity or exported to facilitate trade (1698b: 65). Davenant specifically noted that gold in itself was not valuable to the nation, but the use to which it was put was key as "we esteem that to be Treasure which for the use of Man has been converted from Gold and Silver, into buildings and improvements of the country" (1698b: 60). Davenant blamed the low living standards in metal-rich "eastern countries" on their government's policy, whereby "treasure which should circulate about, is suffer'd to stagnate in the Princes Coffers" (Davenant 1698b: 64). The circulation of goods and services, which drove the national income, could only happen if specie circulated as well. The well-being of the economy was, for Davenant, served by such a circulation of money (Desmedt 2005: 81) exactly because it encouraged people to work and earn an income. This is a vastly different concept of the economy than that proposed by Mun (1630 [1664]), but it is also different from what Petty (1662, 1676) and King (1696 [1801]) had proposed.

Davenant set out his definition of the economy by measuring national income, national expenditure – or consumption in current terms – and then superlucration, which could be the hoarding of valuables and then the expenditure of these on productive assets, a rough expression of what we might term savings and investment. To make his theory relevant to policy concerns, Davenant estimated the national income and the ability of governments to invest, to compare England with her war-time rival France and trade rival Holland.

2.1 An international comparison of economies

As in 1695, Davenant set out a national account in 1698, but this time he aimed to illustrate how national accounts could be used for the comparison of countries. To attempt such an exercise, the estimator had to

> know the laws, Constitution, Humour and Manners of his own Country, with the Number of its inhabitants, and its Annual Expense and Income from Land, with its product from Trade, Manufactures, and the other Business of the Kingdom: And Mankind in the Mass being much alike everywhere, from a true knowledge of his own Country, he may be able to form an Idea, which shall prove right enough concerning any other, not very distant People. (Davenant 1698a: 10)

Because people were relatively similar across countries, one could extrapolate from the British statistics onto her neighbours, with the help of additional data. Based on this principle Davenant (1698a) estimated the national income of France, England and Holland according to his definition of the economy. Added to this was the tax burden each country incurred to maintain their war debts. Davenant reiterated that the government or monarch, while an influential actor in the economy, was "only a part of this Annual Income, as likewise a part of its Expence" (Davenant 1698a: 195). What mattered, in ensuring the progress of the economy, was to promote the "present Trade, Wealth, Crown-Revenues, and the Annual Income of the People" (Davenant 1698a: 203). It was the current state of the common man – not the nobleman or merchant – which mattered, because they were "exceeding so much the Rich in numbers, [that] the common people are the proper medium by which we may judge the [national] Expence" and income of the nation (Davenant 1698a: 20). This comparative account was the first of its kind, and it is reproduced below:

Table 3.2: England was the strongest if not richest economy in 1698

	England £	France[14] £	Holland £
Annual Income			
Before the War	44,000,000	84,000,000	17,500,000
After the War	43,000,000	81,000,000	18,250,000
Revenues (Government)	3,355,472	13,500,000	4.750,000
Expiring	1,080,909		
Existing	2,274,563		
Debts	17,552,544	100,130,000	25,000,000
Principal is sunk	3,500,000		
In course of Payment	10,852,544		
To be provided for	3,200,000		

Source: Davenant (1698a: 193)

In his assessment of the three countries, Davenant noted that France appeared to be economically superior to England and Holland on the basis of their total national income, even if Holland had gained from the war. But France was a bigger country, with very high debts of £100m, and so she needed to raise a lot of taxes to service that debt, where England had a plan outlined to repay its war-time debts. Davenant argued that the French Royal family, gentry and army in peace times made up only 4% of the French nation, but required 11% of the nation's income to sustain itself. Therefore 96% of the population – the commoners – were left with a very unequal share of the national income, only worsened by the governments need to service its debt, which would be taxed from the commoners. This tax burden on the population should mean that "in France, the Common People must be miserable, and burthened with heavy taxes" (Davenant 1698a: 195), not far off the mark according to a contemporary French assessment (Vauban 1707).[15]

[14] The French estimates were partly based on an unidentified "Manuscript written after the Battle of Laden, giving an accompt of the Crown Revenue, and indeed, of the whole Condition of that Kingdom" (Davenant 1698a: 175).

[15] Vauban's national account estimated that 10% of the French population had been "reduced to Beggary" (1707 [1708: III]). 50% of the population were very poor, to the extent that they could only provide for their own necessities, and could not even afford "to give alms to that tenth" who are beggars (1707[1708: III]). 30% were surviving in "hard circumstances" (1707 [1708: III]) with the final 10% being the gentlemen, lawyers, noblemen etc, but even here, from an estimated 100,000 families, maybe 10% of them were in a situation where "circumstances are easy" (1707 [1708: IV]). Meaning only 1% of the French Population were living in 'easy circumstance', while 90% were in some form of poverty.

In comparison, the English paid only 5% of their national income to the government in peace time, and had paid a maximum 12.5% in war. This meant the French peace situation was as desperate as England's had been at the height of the War of Great Alliance (Davenant 1698a: 196). By this logic Davenant argued that the English economy was doing better than the French economy, even though the absolute size of the French economy dwarfed the English. This was a very sophisticated and influential argument, which may have influenced Davenant's promotion to the head of the Excise Office in 1703 from where parliament would begin to request empirical accounts.

3. The Government sponsored trade account

Davenant spent the years from 1703 leading the Excise Office and tried, with varying degrees of success to get himself commissions to work on economic matters. He may have "established himself as the leading Tory pamphleteer, and built up a claim of some substance on his [Tory] party" (Waddell 1958: 285), but he was by no means always supported by the government. His proposals to estimate the benefit of the French and Indian trade to England in 1704 and to analyse the Scottish Union proposal in 1705 were both rejected (Waddell 1958). Other proposals were funded by the government, such as estimates of the war-time trade between France and the Netherlands (Coombs 1957), and a work promoting the East India Company in 1709 (Davenant 1709) when Davenant's financial situation deteriorates due to his family expenses rather than any fall in income (Waddell 1958).

The impact of his theoretical work is mixed, with some of his political writings opposed or derided, while other submissions appear in Parliamentary sessions and shaped policy directions. One consistent trait of his work was the use of empirics, and it seems to have been influential, as he was eventually asked by the board of "Commissioners for Taking Examining & Stating the Public Accounts" to compose what he called the *Publick Accounts of the Kingdom* (1712).

> I have received from this Honourable Board a precept, dated July 17. 1711.
> directing that I should lay before you, distinct Annual Accounts for the Ten years

> last, to be attested before You, on Oath of the Importations and Exportations of all commodities, particularly the Woollen manufactures. (Davenant 1712a: 5-6)

This is the first example of a government seeking an official national account, beyond the absolute monarchs, who kept accounts of their treasury. To that extent this was a watershed moment in national accounting history.

Davenant did as instructed and produced trade balances with the statistics available from the London docks, extrapolating to the provinces. He did not feel confident that the data were comprehensive enough for the first decade of the 1700s as the extent of British trading partners had grown too big for the small Excise Office to cover completely. So instead of producing a nationwide trade balance for the decade as requested by the board – which he could not conscientiously do – he provided an estimated trade balance for 1663 and 1689 (Davenant 1712a: 45). He supplemented this with individual trade balances between England and Holland for 1698-1703 (Davenant 1712b: 16-17), England and France, England and Holland, and England and Spain for 1701-1710[16] and a total trade balance for the wool export in 1699 which made up 43% of exports that year (Davenant 1712b: 71).

Davenant clearly did not want to exceed the brief given him by the Commission, so he provided no empirics on the wealth of the nation or the national income – terms conspicuously absent from both volumes. What he did do was make policy recommendations related to the economy already outlined in 1695 and 1698. He explicitly stated that having a positive balance of trade was not always beneficial, but that the balance depended on the type of exports (Davenant 1712a: 53-4). He had been asked for a balance of trade investigating the commodities only, but he noted that although Holland was at a disadvantage in terms of its balance of trade with England, the Dutch were getting richer because of the type of export they sold to Britain. The Dutch re-exported goods which they had processed and thereby gained a domestic profit. This processing and "re-exportation" of goods was good for the nation, because it generated value domestically and allowed "superlucration" to take place (Davenant

[16] These are supposed to be in the Annex to the First volume, but I could not locate them in the British Library copy of Davenant (1712a, 1712b).

1712a: 53). According to Davenant the balance of trade and even the total balance of payments should be considered in relation to the type of goods being imported and exported, and only then could longer-term economic growth be encouraged.

Davenant used this account to continue his arguments of 1695 and 1698 that a surplus of exports over imports contributed to the economy as a whole, even if he did not set out the full national account. In particular, increased trade would add to the shipping capacity, and therefore to the national capital and increase the stocks held by the "middle rank of men" (1712a: 50). This increase in the wealth of the commoners would help keep interest rates low and the price of commodities stable, encouraging farming and increased the availability of money. Therefore trade was useful and could support the national industry. The aim of trade policy should not be to maximize the balance of trade surplus, but rather

> to promote Navigation, to encrease our Seamen, to make the Kingdom Rich in Reality, as well as in Opinion, and to bring in Bullion, [therefore] all our Endeavors must tend to the advance of our Trade. (Davenant 1712b: 64)

The advancement of trade would lead to better "navigation" or shipping business and increased employment of sailors; this would probably bring in more specie, which could be used to extend the trade and domestic production. While the final report to the Commission had a different intention than Davenant's first two national accounts, he maintained his definition of what national income was and how one should go about increasing it. While the Commission had only asked for a trade balance, Davenant delivered a set of policy recommendations with empirics. The estimates were based on trade data and his definition of the economy. He would not be available to explain the full extent of that advice to those who continued the debate about the economy in the years that followed, as he died shortly thereafter. The debate that followed Davenant's death was driven by the passing of Queen Anne that same year and the political vacuum it left behind, as she had no children who could take the throne.

Davenant contributed detailed accounts of how he defined the economy, and while his policy recommendations were at times rejected, the overall definition and scope of his

enquiries appear to have found favour both in government and more generally. I make that point here, because after his death, in a clear signal that empirics were important for governance in the early 18th century, his latest statistics and his definition of the economy were seized upon in the political and economic debate.

4. Same debate, new rules: Periodicals and Parliament

The debate on economic policy shifted with the passing of Queen Anne in 1714, and it is necessary to understand why it did so and where it went to track the history of what defined the economy during this period. This debate drew on Davenant's work and was shaped by empirical considerations which remained important as a source of evidence long after Davenant's and the Queen's deaths. With the Queen's passing, parliament was left to choose a new monarch, because there was no direct heir. The late Queen's Tories were at odds with the opposition Whig Party on who should take the throne, and with a parliamentary election in 1714, the race was on to convince the public and parliamentarians of the royal candidates (Simms 2008). What specialist historians of economics have missed, but more general historians have known for long (Rowse 1944, Copley 1984, Simms 2008), is that this political debate and the ensuing economic debate did not take place between academics, and not within government, but in the recently liberalised press. This took the shape of political and economic periodicals that boomed after the censorship law had lapsed in 1695 and the introduction of copyright in 1710 (House of Lords 1802: Bill no. 6).

A periodical is neither a newspaper nor a pamphlet. Payne (1951) likens it to the work of a modern columnist or editorial writer, offering a series of essays, published weekly or more frequently. By 1738 they were so influential that an MP complained to the House of Commons that "the sentiments of one of these scribblers have more weight with the multitude than the opinion of the best politician in the Kingdom" (Cobbett 1812a: 448).[17] More than 300 periodicals were started between 1700 and 1716 (Payne 1951), and the best were read by commoners and noblemen alike. Several of them were therefore sponsored (openly or secretly) by politicians to convince parliamentarians, the professional classes and the landed gentry of their arguments. By Davenant's death these periodicals were the forum of debate for

[17] A *verbatim* record of the House of Commons. See bibliographic notes for details.

economic policy, and it was no longer necessary to be a member of the Privy Council or the Excise Office to be influential in British policy making. This change has gone unnoticed in the British history of economics literature, although its importance has been noted for France, where periodicals experienced a similar growth and relevance for economic discourse from the 1750s onward (Théré 1998). The next two sub-sections show how the Tories and Whigs used periodicals to argue their economic cases on the basis of empirics, and how Davenant's arguments continued to be influential.

4.1 The Tory leader uses a periodical and empirics

In 1713 as Queen Anne's illness worsened, the Tory leader, Lord Bolingbroke, set up a periodical to promote the "Bill of Commerce" – a trade agreement with France to promote the accession of the Catholic James Stuart who was exiled in France at the time. The Whigs objected to James Stuart and favoured a protestant succession. To argue against the Tories, they needed to refute the economic arguments constructed by Bolingbroke, who had used Davenant's recently published balance of trade figures to argue for better relations with France. The Tory government made its arguments in the periodical *Mercator*, "published thrice a week under the auspices of the customs house and government which wanted to encourage the recent treaty of commerce with France" (King 1743: X).[18]

The Tory authors of *Mercator* took Davenant's trade balance and did exactly what Davenant had warned not to do: They only read the empirics and inferred that the economy was wholly defined by the trade balance. Davenant's concern about the type of export and the domestic economy, not to mention the capital account, was swept away in favour of the empirics he had submitted to the Commission. This indicates the importance attributed to empirical evidence in the early 18th century, even if it was a selective reading of Davenant.

Mercator focused on the fact that the "Ballance of the Trade every year being to the loss of France" had to be to Britain's profit (Mercator 1713a: 3). Under the proposed treaty, the French government would be forced to reduce their import tax to 1664

[18] King (1743) is a re-production of the *British Merchant* periodical. See bibliographic notes for details.

levels, and 1699 levels for manufactures. The treaty also "kept on the high duties of the French Goods in England" meaning English import taxes paid by French exporters remained high (Mercator 1713a: 3). As the trade balance alone decided the state of the economy according to this narrow empirical reading, the treaty favoured British exporters while taxing foreigners, so the treaty was a good idea.

With a proposed tax on imports, the *Mercator* completed the corruption of Davenant's ideas about demand, where he had so emphatically argued against sales taxes as it decreased domestic demand (Davenant 1698a: 254). The *Mercator* argued that without the treaty there would be no "encouragement to our People to Export any great quantity thither, or their people to buy them when they arrive" (1713b: 17), so a failure to pass the bill would cause severe "Damage to this Nation" (1713b: 17). Given that the periodical had defined the economy wholly by the empirics of a trade balance, any increase in the trade balance was by definition good for Britain. Davenant, who had objected strenuously to Pollexfen's argument along these lines, and who had warned against focussing only on trade, would have disagreed with such a reading, but Davenant's political allies were no longer in charge, and his advice was probably not sought, only his empirics. *Mercator* was criticised by the Whig politicians, and despite the fact that Britain was still at war with France in 1713, the arguments remained centred around the economics of the treaty. *Mercator* counter argued that its opponents did not understand the treaty and the economics (1713a: 3) or they were politically motivated (1713d).

There was a definite political motivation: The Whigs preferred the protestant George Ludwig of Hanover for King, and probably felt that a free trade agreement with France, where James Stuart was exiled, could open the door for a Catholic succession. But to challenge the Tory position they had to challenge the Tory definition of the economy which the *Mercator* had adopted from Davenant's work. The *British Merchant* was therefore established, and it quickly became a leading economic periodical. The list of subscribers is indicative of its impact; it included, amongst others, the Prince of Wales (the future King George II), three Chancellors of the Exchequer (The Earl of Stanhope (a co-founder), Robert Walpole, and John

Aislabie,[19]) and the Duke of Marlborough, Britain's greatest war hero at the time. Published twice a week, the periodical ran from 1713 to 1721, and was written by merchants of high standing and senior government officials.[20] Its definition of the economy was much closer to Davenant's original idea of domestic industry and trade, and it used this to argue against the trade treaty.

4.2 The Whig Party and the *British Merchant* Economy

The *British Merchant* is generally presented as an un-academic, and therefore insignificant, pamphlet which made a last attempt at using empirics in the 18th century (Schumpeter 1954 [2006: 351]). The periodical merits a mention by Studenski (1958: 40-1) and Hoppit (2006) because it applies empirics to economic enquiry. Studenski and Hoppit both present the empirics as an extension of William Petty's 17th century figures, while others claim it was just a copy (Giffen 1889, Deane 1955). In this sub-section I argue that such a perspective is much too simplistic and ultimately does not stand up to scrutiny. The *British Merchant* was not an insignificant copier of empirics; it was an applied counter-argument to the Tory position on the French trade treaty. Moreover, it applied Davenant's theory of the economy and updated his figures to make its case.

In its inaugural issue the *British Merchant* declared that "trade may be of Benefit to the Merchant and injurious to the Body of the Nation" (King 1743: 1). This was a direct challenge to the *Mercator* and the *British Merchant* went on to argue its position with a new set of empirics. The Whigs, who opposed both the Stuart succession and the French trade treaty, argued in the *British Merchant* that "His most Christian Majesty [George I] was so sensible that his subjects were the Riches of his Country" not the trade balance (King 1743: 172). The main mistake of the Tory position was that:

[19] Walpole was chancellor 1715-1717, The Earl of Stanhope then served from 1717-18, Aislabie served from 1718-21, and Walpole returned in 1721 to hold the position for twenty years.
[20] Contributors are listed on pages XIV-XV in British Merchant (1713-21) as: Henry Martin Esq. (inspector general of the exports & imports), Sir Charles Cooke (merchant, lord commissioner of trade and plantations), Sir Theodor Janssen Bar, James Milner Esq. (merchant, member of parliament) Nathaniel Toriano (merchant) Joshua Gee (merchant) Christopher Haynes (merchant) and David Martin (merchant)

> The Gentleman fondly imagines that he receives his Rent from his Tenant ; the Weaver that he is paid his Wages by the Master-Clothier : But it is the Consumer that pays both. (King 1743: 166)

It is worth dwelling on this statement. The *British Merchant* argued that domestic consumers were responsible for generating the income of the people through their expenditure. The domestic economy was the driver of national income and it could be empirically investigated, just as Davenant had done.

They argued that the average British person spent £6 per annum on domestic consumption and housing (King 1743: 166) and therefore "everyone is a market of such value to his country" (King 1743: 167). Multiplying this by an estimated population of 7 million, equal to Davenant's (1695) population estimate, domestic expenditure on British goods, services and rents came to £42 million.

Domestic demand was at the core of the economy, as it had been for Petty, King and Davenant. The *British Merchant* declared that "for my part therefore I consider every person in the Kingdom for what he eats and drinks and wears, as a Tenant to the Lands and a Paymaster of our Labourers" (King 1743: 166). Domestic expenditure contributed to the economy as the "paymaster" of wages and "tenants" of the soil. So far the *British Merchant* economy looks very similar to that proposed by Petty (1662, 1676) and King (1696 [1801]), where land and domestic labour defines and determines the national income.

Then the *British Merchant*, like Davenant, expanded the definition of the economy as exports could also add to the national income. To make that case, the *British Merchant* calculated the net exports from customs data collected by the Excise Office and the "Inspector General" (King 1743: 168) – this was Davenant's title from 1703 to 1713 (Waddle 1958) and the position of Henry Martin after 1713, one of the contributors (King 1743: XV). Like Davenant, *British Merchant* found that a comprehensive national balance of payment could not be estimated with any certainty, so they focussed on Britain's major trading partner: the Dutch. Where Davenant's estimate for the Dutch net exports in 1702-3 was £1.89m (1712b: 17), the *British Merchant* arrived at a net export figure of £2m (King 1743: 168). They used this

figure to estimate that the British national income would be between £49m-£50m (King 1743: 170) if the trade with all other countries and colonies was included, approximating a net export surplus of £7m-£8m. Contrary to the many claims that the *British Merchant* figures were similar to Petty's results, it seems clear to me that they were different in substance and in the total from Petty's and were much closer to Davenant's proposed economy, especially if one considers *Table* 3.3:

Table 3.3: *British Merchant* did not copy William Petty, but adopted Davenant

	Petty '62 £	Petty '76 £	Davenant £	B.M. £
Domestic Activities	40 m	42 m	43 m	42 m
Balance of Payments			6 m	8-9 m
National Income	40 m	42 m	49 m	49-50 m

Sources: Petty (1662: 7, 1676), Davenant (1695: 121), King (1743:168-70)

It is this *British Merchant* estimate of a national income from expenditures on domestic activities and earning on exports which is criticised by Giffen (1889), Deane (1955), Studenski (1958) and others for being a copy of Petty's 1676 work. With *Table* 3.3 I have tried to point out the oddness of such an argument, but, as a letter to the *British Merchant* at the time noted, the per capita income of the *British Merchant* estimate is £7 per annum just like William Petty's (King 1743: 188). Why the critics of the *British Merchant* statistics are so fixated on this point and dismiss this estimate, and eventually the entire early 18th century as unempirical, by stating that the *British Merchant* had not done something new does not seem a logical critique to me.

Firstly, the *British Merchant* implied a per capita income between £7 and £7 1*s* 14*d*, given seven million British residents. Secondly, both Petty and Davenant set out accounts for England (which included Wales at the time), not Great Britain, which includes Scotland, as Britain was only created in 1707. Thirdly, in his first national account, Petty had estimated a rounded national expenditure of £6 13*s* 4*d* per capita (1662: 7) and had no foreign trade in this estimate. In 1676 he estimated the national income at £42m giving a per capita income of £7 with six million people. Stating explicitly that national income did not equal national expenditure. These seven pounds per capita were not national income, but the national expenditure per capita

that Davenant (1695) adopted as the average expenditure necessary for *subsistence* in 1695. So if anything, the *British Merchant* figures resemble Davenant's results, not Petty's.

Table 3.4: *British Merchant* updates Petty and Davenant's per capita income figures

	Petty '62 England	Petty '76 England	Davenant England	B.M. Britain
Population	6 m	6 m	7 m	7 m
Per capita income	£6 13*s* 4*d*	£7	£7	£7 - £7 1*s* 14*d*

Sources: Petty (1662, 1676), Davenant (1695), King (1743)

I see no reason to suggest that the *British Merchant's* estimates were copies of Petty's figures. The population figure seems to have been adopted from Davenant, and the income figures are updates of Davenant's figures, as the argument is made that international trade has grown in significance from £6m to £8m-£9m. For Davenant there was a real issue as to whether the national income would exceed the national expenditure, because the difference could be invested as national wealth. In 1695 and 1698 Davenant had suggested that during war, the population would be living close to subsistence and wearing down the national stock, so people's income would equal their expenditure. As the *British Merchant* was published there was also a war being fought, but it still suggested that Britain could sustain superlucration.

With a national income of £49-50m the *British Merchant* provided no final total for the national expenditure, but did supply the components. Accepting that the domestic expenditure on land and labour was £42m, they were aware that some British incomes would be spent on imports. Based on the import records, they estimated that four million pounds were spent on imports every year, or approximately 11*s* 5*d* per capita (King 1743: 170, 189). This means the national expenditure of £6 11*s* 5*d* per capita was less than the national income of between £7 and £7 1*s* 14*d*.

Both Petty and Davenant would have expected an imbalance between national income and national expenditure during peace time as this allows "superlucration" to take place. The *British Merchant* (1713-21: 176) even referred to Petty's (1676: 96) statement that the difference between national income and national expenditure was

the money available for increasing the national wealth or stock. On that basis, Britain could afford to invest in national stock worth £3m - £4m per annum. This sets the *British Merchant* estimates apart from any previous war-time national account and, I think, contradicts Maddison's (2007: 287) claim that no empirical work was done after Davenant's death – a position further challenged in the next two chapters.

The *British Merchant* concluded that since 1665 "our Industry at Home and our Trafick to Foreign Parts, the Stock, as well as the Value of the Lands of England, have been prodigiously encreas'd and augmented" (King 1743: 179). This conclusion concurred with the inspector general's reports to parliament and "Dr. Davenant's assertion" that British wealth had grown faster since 1680 (King 1743: 181). The *British Merchant* economy was a much bigger entity than the trade balance proposed by the Tories.

The Whig authors therefore argued that the proposed free trade treaty with France would not impact the economy significantly, as the trade balance made up such a small part of national income. For example, the mighty trade with the Dutch – Britain's largest trading partner – only contributed 4% of the national income.[21] Signing a treaty with France, the enemy that Britain had just defeated could not be supported on economic grounds as the French trade had diminished significantly during the war years. The argument in the periodicals was framed in terms of economics, and the final point was that failing to sign a treaty with France would hardly bankrupt or 'damage the nation', as the economy and its growth relied on domestic demand much more than it did on international trade.

As a result of this periodical debate and the Whig political pressure "the bill of commerce was defeated in the commons by nine votes, thanks to the speaker (Sir Thomas Hanmer) who opposed the bill" (King 1743: xiii). The balance of trade was not at the centre of the economy. Policy makers should focus on increasing "our own consumption, [as] the consumption of our own People, are the best and greatest Market for the Product and Manufactures of our own Country. The preservation and increase of this Market ought therefore to be the thing principally regarded" (King

[21] Net benefit of £2m is between 4% and 4.08% of the total if national income is £49m-£50m

1743: 167). Davenant's economy remained the guiding principle for policy making even after his death.

5. A period defined by the domestic and international, via empirics

The economy of Davenant and the *British Merchant* was characterised by the notion that domestic labour, regardless of its type of employment, would generate an income that added to the economy. International trade was important, but it was subsidiary to the domestic economy, and according to Davenant (who followed Petty) it should be treated as a vent for excess production, not the driver of economic activity (Magnusson 1995: 34). Increased exports could encourage more economic activity, but the balance of trade mattered less than the balance of payments, which in turn was only a small part of the economy. So, unlike arguments for a mercantilist age (Heckscher 1994) or neglect of empirics in the early 18th century (Studenski 1958), I argue that the period from around 1695 to 1720 was dominated by an economy conceptualised as a combination of the domestic and international, and it was accounted for quite thoroughly.

The importance of empirical reasoning and government use of statistics seems reasonably clear. Davenant's accounts were used in parliament because they had empirical substance, and it was his empirics the periodicals used to make their own arguments. The importance of such reasoning by numbers had been raised by William Petty, and it was gaining wide-spread acceptance by government, reflected in John Arbuthnot's 1701 call to "keep public account with numbers" (Poovey 1998: 148, footnote 95). Hoppit even provides a topical list of parliament's requests for statistics over nine sessions in the 18th century, finding that 382 reports were requested on the economy alone (Hoppit 1996b: 522). I see no support for the common supposition that the 18th century was somehow devoid of empirical thinking or economic debate which used empirical evidence. Considering the written output of the period and the growing importance of public debate as periodical circulation grew, it is more likely that empirics were becoming more important, not less. The average output of books on economics, based on private collection estimates, doubled after 1695, with the

economics literature growing twice as fast as average book publications from 1700 to 1740 (Hoppit 2006: 86).[22]

There were authors during this time that fit the stereotype of mercantilism. Pollexfen (1697a) and *Mercator* both propose an economy based on an odd combination of Malynes's (1601, 1603) focus on specie and Mun's (1630 [1664]) balance of payments with parts of Davenant's empirical trade balance thrown in as empirical evidence. To evaluate their importance, one should ask the 'Namierite' question: Who were these people and what did they want? Both Pollexfen and *Mercator* were politically driven, but they had little or waning power. These ideas were refuted by Davenant, by the government from a position of power, and by the *British Merchant* when the Whigs were coming into power. So the impact of these 'mercantilist' ideas, I conclude, was minimal. The period from 1695 to 1720 should not be considered as governed by something resembling mercantilism but rather by Davenant's empirical measures of his economy.

Davenant's books were innovative, not only for combining the international and domestic markets as the economy, but also for his formulation of the law of demand and the introduction of "prime costs" (1712a: 30). The prime cost was the cost of internationally traded goods or services before any commissions, freight, customs, and merchant or retailer mark-up. In modern terminology, Davenant conceptualized and calculated the *factor cost* of imports and exports. This is the first use of factor costs in a balance of trade or payments, a point which eluded Studenski's attention (1958).

Davenant's work is also interesting from a methodological standpoint. Early 17th century authors in England tended towards a traditionalist method for 'proof' of the validity of their argument, meaning they would refer to classical authors such as Plato or Aristotle in ever more complicated prose, as support for their argument (Poovey 1998). During the middle of the century, this method of argument was replaced first by a 'simple' method of arguing and appeals to logic in clear, concise language as in Mun (1630 [1664]), and then to empirical data as in Petty and King's work. Davenant

[22] Hoppit (2006: 87-8) also provides detail on the how long these works were, noting that on average the books in the 25 years after 1695 had shrunk by ten pages. In total there was a 155% growth in total pages on economics in books from 1670-95 to 1696-1720.

combined the empiricism of late 17th century with historical references, to provide examples and case studies. This was an innovation at the time and another change in how arguments about economics evolved, by using past experience as well as data.[23]

This historical and empirical evidence was used in the periodicals that set the stage for debates about economic policy and defining the economy in the 18th century. This debate between the *Mercator* and the *British Merchant* resulted in a definition of the economy which estimated and defined the total consumption of the population as the driving force behind economic growth, in line with Davenant's economy. This vision of the economy was not questioned in the 1720s, it was discarded. This was done by a strong parliamentary government and a revolution in public finance, which shifted opinions and policy making on the economy between 1720 and the 1740s.

[23] For example, Davenant includes a new translation of Xenophon's (430 BCE – 354 BCE) trade accounts from ancient Greece, to illustrate that work along these lines had been important for statesman in other times and places. (Davenant 1698b: 34, and his appendix)

Chapter 4

The credit driven economy of Defoe and Walpole, 1720 - 1742

> “Credit is the foundation on which the trade of *England* is made so considerable…
>
> -Daniel Defoe (1738: 193)

Since McCulloch’s (1825) first history of political economy, almost every history of economics, from the classics (Schumpeter 1954, Blaug 1978) to the most recent work (Roncaglia 2005, Maddison 2007)[1] have a gap between 1699 and the 1750s, as if the intervening years never happened. This is very odd when those 50 years represent some of the most exciting times in British history, with the emergence of the world’s first parliamentary government. In this chapter I argue that the economic discourse which took place in periodicals and government in the early 1700s continued in the 1720s and 1730s. Driven by the need to convince the public and parliamentarians of the government’s economic policy, the economic debate was carried out in public, through books and government releases in parliament. I argue that the first prime minister of Britain, Robert Walpole, who led domestic economic policy and the country from 1720 to 1742, held a consistent theory of what the economy was. It was a theory set out in print by the leading economic journalist of the day, Daniel Defoe. Moreover, Walpole used up-to-date empirical accounts to convince parliament of how well he managed the economy.

This chapter builds on the extensive economic history of public finance in early 18th century Britain. This literature has primarily focussed on technical aspects, with some interdisciplinary work (McGrath and Fauske 2008) on the creation of the Bank of England was created and on how it mobilised debts through credit instruments. I argue that this phenomenon of debt creation and paper credit did not go unnoticed at the time, and indeed changed the way policy makers defined the economy. In her

[1] A brief list of other histories that carry the same narrative: Mavor (1889), Backhouse (1994), Robbins (2000), Medema and Samuels (2003), Samuels, Biddle and Davis (2003) and Landreth and Colander (2002). A few follow the same pattern but mention the English economist Arthur Young (1741-1820): Studenski (1958), Vaggi and Groenewegen (2003) and Maddison (2007). Some, like Medema and Samuels (2003), do include Mandeville (1670-1733) or Hutcheson (1694-1746), Adam Smith’s teacher, but for his social science contribution, not for a contribution to economics.

work to bring together this time of paper money and written economic debate, Poovey (2008: 154) complains that "by and large, modern historians, both Literary [sic] and economic, have forgotten the Paper Age." I address this issue, by engaging with the contemporary interpretation of what North and Weingast (1989: 820) call the post-1688 "financial revolution" of Britain.

There is good reason to see the British government's empirical publications throughout the 1730s and 1740s as national accounts addressing a very specific and consistent definition of the economy. I base this argument on the economic contributions of Daniel Defoe, complemented with primary sources from the House of Commons and HM Treasury which highlight how the new parliamentary government managed its economy. This chapter attempts to fill a hole in our understanding of the mercantilist age and in the history of British empirics (Deane 1955, Desrosières 1998, Stone 1997), national accounting (Studenski 1958, Vanoli 2005) and the economy (Hoppit 1996b, Schabas 2005). All of these authors neglect this very exciting period of history, for reasons that become apparent in the next chapter. Below I will focus on the theory that I argue framed policy making in Walpole's Britain: a theory set out in terms of "consumers", "factors" and "traders." A theory very similar to neoclassical economics, which is especially surprising for a time supposed to have had no economics at all.

1. Daniel Defoe and his economics

The author of *Moll Flanders* and *Robinson Crusoe* has, according to Backhouse (2007: 63), "conventionally been regarded as much less important in the history of economics, than in English intellectual life more generally" and Defoe's economics has attracted little discussion (see Earle 1977, McWeagh 2006). This is unfortunate, as Defoe was a prolific author of books on finance and trade (Owens and Furbank 2000). He has even been considered "the most important economic journalist of the early eighteenth century" (Stevens 1978: 690) contributing to or editing numerous periodicals throughout his life;[2] he is characterised by Schumpeter as "a most brilliant and prolific writer" (1954 [2006: 351]). Defoe worked directly for the Tory Secretary

[2] Defoe wrote and published the very popular *Review* (1704-11), contributed to *Mercator* (1713-14), edited and wrote for *Mercurius Politicus* (1716-20), and *Manufacturer* (1719-21).

of State, Robert Harley, in 1707 and later for the Whig Chancellor of the Exchequer, Godolphin, when not acting as a government publisher, advocate or spy. Even *Mercator*, discussed in the previous chapter, has been described as Defoe's "one-man show" (Schumpeter 1954 [2006: 351]).

His relative omission from the history of economics is particularly unfortunate, as Defoe's most popular book at the time (based on its frequent re-publication) was on economics and the measurement of the economy. *The Complete English Tradesman*, first published in 1726, re-printed with *A Supplement* in 1727, and then re-published fully in 1732 and again in 1738, has only been considered in literary studies (e.g. Bender 1987), not the history of economics despite its content. I argue that its account of the economy, both empirical and theoretical, represents how both Defoe and parliament conceptualised the economy during this period. That is why it was cited by contemporary economists across Europe, like Vincent Gournay (1753 [2003:381]), discussed in chapter seven. It is why its re-publication coincides with public dissent over the government's economic policy, and why parliament was given accounts in the 1730s which address Defoe's economy.

1.1 The Economy

Defoe opened his book with the simple statement "that an estate is a *Pond*, but trade a *Spring*" (1738: xxii). To Defoe, estates – or land – were fixed, but trade, part of which derived from land, could change and grow like a spring. By trade, Defoe did not refer to the international markets, but rather to "the circulation of commerce amongst ourselves" (Defoe 1738: 183). This circulation of commerce was a result of the demand for goods, so "consumption increases the quantity made, and this creates what we call *Inland trade*, by which innumerable families are employed, and the increase of the people maintained" (Defoe 1738: 182). "Inland trade" was a term for the domestic circulation of goods and services, and this was not a new idea. Thomas Mun had used the same term as early as 1630 when he described the "inland trades between City and City" (Mun 1630),[3] and both Petty and Davenant used trade to refer to the internal circulation of goods, even if we today tend to assume that any pre-1776

[3] From an electronic version on http://socserv.mcmaster.ca/~econ/ugcm/3113/mun/treasure.txt [accessed June 2010]

mention of 'trade' refers to international trade. As Earle (1977) recognised, and Stevens (1978: 691) repeated, this internal trade was "a factor in [the] economic development" that Defoe analysed. Defoe's focus on an economy driven by inland trade sets it apart from the previous work of Petty and Davenant which focussed on the creation of national stocks (e.g. Davenant 1695: 195, 1712a: 53). The asset base did not define national wealth and was not the key determinant of national income:

> The greatness of the *British* nation is not owing to war and conquests, to inlarging its dominions by the sword, or subjecting the people of other countries to our power; but it is all owing to Trade, to the increase of our commerce at home, and the extending it abroad. (Defoe 1738: 179)

The acquisition of new lands did not add to the "greatness" of Britain, because land only contributed to the economy if it was used to produce something. Land yielded raw materials or rent *when used*, so land would be beneficial if there was a demand for its use; otherwise it should be left fallow (Defoe 1738: 301). Such demand would only be realised if trade occurred. "This I call inland trade, and these circulators of goods, and retailers of them to the last consumer, are those whom we are to understand by the word tradesmen" (Defoe 1738: 183).

Defoe's view of the economy was one driven by these inland traders serving consumers who demanded goods. To meet consumer demand, the traders would seek out manufacturers, who in turn sought out raw material producers – the land owners or tenant farmers. The initial trader bought new goods from the manufacturer, and the goods entered the flow of trade where it would eventually be sold to the final consumer. "The more hands it [trade] goes through, the greater public advantage to the country" (Defoe 1738: 298), because increased trade led to employment and higher wages:

> What is it but Trade, the increase of business at home, and the employment of the poor in the business and manufactures of the kingdom, by which the poor get so good wages, and live so well. (Defoe 1738: 180)

Inland trade provided wages and employment in the business and manufactures at home. By passing through so many hands it generated income to each person who participated, not unlike our current notion of value added in national accounting. Defoe also argued that this circulation encouraged exports especially when trade was concentrated in large cities (Defoe 1738: 280-5). Large cities which exported would then spread employment across the country, as trade engaged thousands of people to serve the export demand.

With more wages being paid and more employment, "the working manufacturing people of *England* eat the fat, drink the sweet, live better and fare better" (Defoe 1738: 181). So with more income and employment came more consumption. Moreover the type of consumption would change with higher incomes, and people would demand better housing and higher quality food. So the increased "consumption of provisions increases the rent and value of the lands; and this raises the gentleman estates, and that again increases the employment" (Defoe 1738: 181).

Inland trade and exports both led to higher wages, higher wages to consumption, and higher consumption to diversified and higher demand, raising returns on land and encouraging more trade. This economy is a circular flow of goods and services, but there was no concept of "superlucration" as in Petty, King or Davenant (1712a: 53). Superlucration, in the 17th century context, was the difference between national income and national expenditure and thereby the money available for investing into capital projects, which could lead to growth in national income (Petty 1676: 96). For Defoe, traders' stocks mattered, because these were the goods that would circulate, but the national stock in terms of land or capital was only valuable insofar that it produced commodities or rents which increased inland trade. The growth of the economy, or the "greatness" of Britain, could be estimated by considering the difference in the trade flow year on year. Defoe had incorporated Davenant's (1695, 1698, and 1712) and the *British Merchant*'s (1713-21) notion that both the international and domestic market could add to the economy, but he had no need of a national stock. Trade – the inland trade – was what mattered.

1.2 The source of trade

But what was trade based on? Defoe emphasised that traders needed to demand goods to be produced and that "credit is the foundation on which the trade of *England* is made so considerable" (Defoe 1738: 193). The ability of British traders to acquire credit and guarantee loans meant that they could purchase more goods than their immediate assets allowed. Part of the reason why the national stock was not the basis of growth was that credit could substitute for assets in the trader's world. A trader could start out with no assets and invest in trading stock based purely on credit. Similarly, established traders could acquire a much larger turn-over by extending and receiving credit. This increased the flow of trade in the economy, meaning economic growth. It is worth quoting Defoe at some length to appreciate his logic:

> I may say, many a tradesman begins the world with borrowed stocks, or with no stock at all, but that of credit, and yet carries on a trade for several hundreds, nay, for several thousands, of pounds a-year.
>
> By this means the trade in general is infinitely increased--nay, the stock of the kingdom in trade is doubled, or trebled, or more, and there is infinitely more business carried on, than the real stock could be able to manage, if no credit were to be given; for credit in this particular is a stock, and that not an imaginary, but a real stock; for the tradesman, that perhaps begins but with five hundred, or one thousand pounds' stock, shall be able to furnish or stock his shop with four times the sum in the value of goods; and as he gives credit again, and trusts other tradesmen under him, so he launches out into a trade of great magnitude.
> (Defoe 1738: 192)

The traders who generated demand, and by extension incomes and jobs, did not require a set of assets: If they could acquire credit they could start to accommodate the demand of consumers. Their trading stock could then grow as the availability of credit instruments grew. Credit substituted for assets when acquiring goods and more goods thereby entered the flow of trade, which in turn led to a greater base to acquire credit from. Defoe provided a brief example to illustrate just how significant credit was:

Suppose there is demand for a bundle of goods worth £100,000, and to reach the final consumer it has to pass through ten sets of hands. For this bundle to reach the

consumer, each trader would have to raise £100,000 to buy the bundle outright. This means that one million pounds needs to be raised to accommodate £100,000 of demand. In Defoe's terms, one million pounds was therefore "returned in trade for that one hundred thousand pounds worth of goods" (Defoe 1738: 189). If none of the merchants have any liquid funds, the amount of credit needs to be ten times more than the original value of demand. So to accommodate domestic demand, the merchants either needed to hold a lot of reserves or have access to well organised credit. If any one of the traders were unable to raise £100,000, the value of goods in the economy decreases, as the trader who is not creditworthy is a bottleneck in supply. Demand alone is not sufficient, and if traders could not access credit they would be unable to sustain the same level of inland trade, and the goods would simply not be available:

> Nor is it enough to say, that people must and will have goods, and that the consumption is the same; it is evident that consumption is not the same; and in those nations where they give no credit, or not so much as here, the trade is small in proportion. (Defoe 1738: 192)

Traders needed to be able to acquire goods on behalf of consumers, and they needed credit to do so. The public availability of credit was the basic constraint of economic activity for Defoe. The economy could function and grow without credit but it would be severely limited. So traders made the economy function, but they could only do that if they had access to credit. The required quantity of credit could simply not be forwarded in specie terms as Poovey (2008) argues, but the introduction of the paper bank-note and a proliferation of new paper money could:

> At the same time, as we have seen, other credit instruments circulated alongside banknotes. As we have also seen, the proliferation of kinds of paper, almost all of which circulated locally, was partly a response to the poor quality and inadequate supply of Britain's coinage; partly of course, it was an articulation of – as well as a spur to – the growth of the British economy, which, fuelled by overseas trade, war expenditure, and a dramatic rise in domestic demand for luxuries, rapidly and dramatically exceeded the coin available to transact domestic business. (Poovey 2008: 174-5)

Paper money and paper credit instruments were becoming more and more usual in 1720s Britain. This derived from the financial revolution of the 1690s, which I argue ties in with the creation of a public debt and the paper issued to guarantee the public loans. In the first instance this paper includes the bonds and guarantees issued by the Bank of England, South Sea Company and East India Company which were all government backed ventures. Alice Carter made this point some time ago, in reference to Company bonds where "The East India Company also managed an annuity loan which, although its capital was devoted to the reduction of the Company's Bond Debt, might well be included in the public indebtedness, since its interest was paid by the government" (1951: 173). These companies had become middlemen for the government, guaranteed to be liquid by a government requiring loans, and one of them – the Bank of England – would in 1725 be allowed to print paper money in return for deposits and securities.

2. Where Public Finance comes in

The basis for a credit economy began with the founding of the Bank of England in 1694 and the bank's facility for offering loans to the government in return for interest bearing bonds. North and Weingast (1989) argue that William and Mary's 1688 promise to abide by common law, led to a credible commitment to service the debts acquired by the Bank. This then established a credible value for the paper bonds issued by the Bank of England in return for loans granted to the monarch by 1694 (after Queen Mary had passed away). With the founding of the South Sea Company and the East India Company the monarch's ability to borrow was extended and eased (Wells and Wills 2000), but his credibility was maintained as the promise to repay was kept, and interest payments were regularly made. So the pieces of paper (usually bonds) issued by the Bank and Companies which guaranteed the debt had a credible value from the early 1700s, as the promise to repay was kept. These debts were the national debts, and were not a parliamentary liability in 18th century Europe. Rather they were "usually guaranteed by pledges of jewelry, specific revenues, or real property; and almost invariably they were regarded as personal obligations of the

reigning sovereign" (Hamilton 1947: 118). So the sovereign was personally accountable for the public loans.[4]

This increase in public loans to the monarch, and the national debt, should, according to modern economic historians, have crowded out private investment (Williamson 1981, or Weir 1989 for a review); but North and Weingast (1989: 824-5), in concert with Dickson (1967), Neal (1990: 11), Roseveare (1991: 47-51) and Caruthers (1996) argue that the crowding out effect was more than offset by the increased availability of loanable funds as a result of the credible royal guarantee. Therefore "public and private finance could expand in tandem" (Quinn 2001: 594) because the paper bonds issued by the Bank of England were accepted at their face value as guarantees for other bank loans and even stock market transaction. The government paper bonds were trusted to return the value written on them in full. This meant that holders of national debt bonds could acquire credit – or make transactions with government bonds. With the national debt growing from £4m in 1695 (HoC 13 Dec 1695) to £47m in 1717 (Anon. B 1717) the availability of the paper bonds grew steadily:

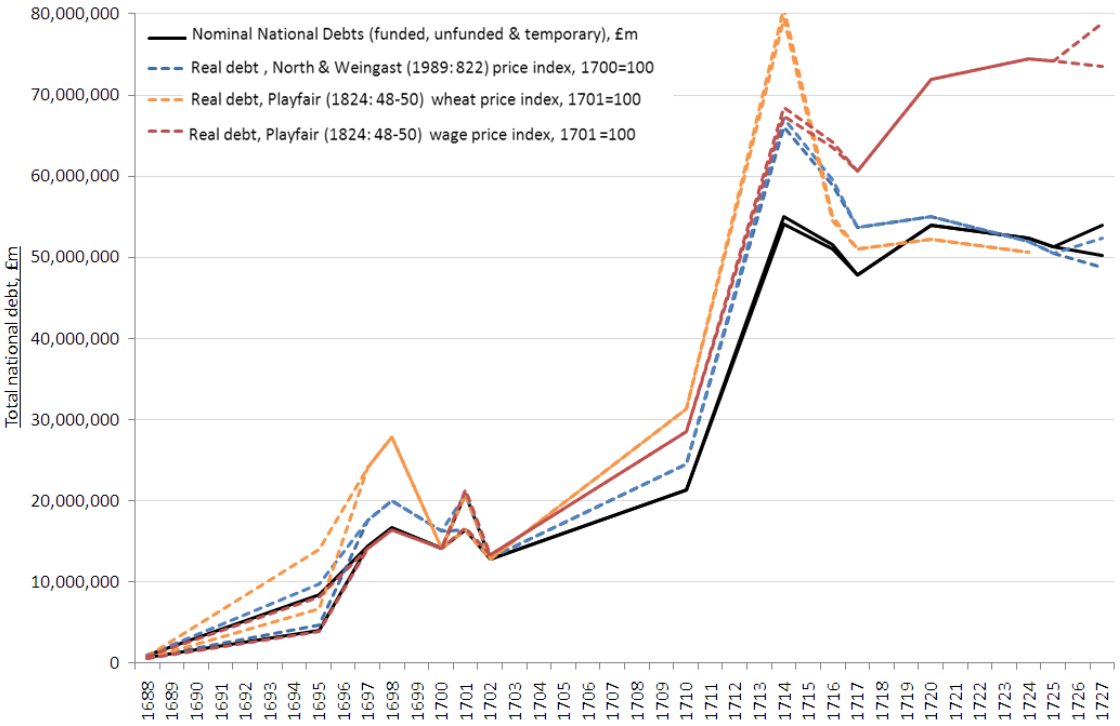
> Nothing more strikingly differentiates the 18th century from its predecessors than the widespread adoption by governments of the technique of borrowing on transferable securities. In England this development committed the state to a role of fundamental importance in the nation's economy. (John 1953: 954)

The issuing of paper with a credible guarantee to repay became a defining feature of Britain's early 18th century. When Defoe discussed the availability of credit in 1727, it is in the context of a growing paper credit economy, where around 52 million pounds worth of paper were available for transacting business. £52 million would have been enough to rent every piece of land in London four times over only 20 years earlier by Davenant's numbers (1695: 121). There is no complete dataset of how much debt was managed by the government backed institutions from the Glorious Revolution of 1688, but I have collected the available estimates from parliament, the Treasury and public debate, to give an idea of how fast this issue of paper credit happened, both in

[4] As the 1690 House of Commons statement regarding the national debt illustrated: It was a "Motion being made for raising a Supply to be granted to their Majesties for Satisfaction of the said Debt" (JHoC 1690 25 Nov). Parliament would approve the tax increases the monarch was entitled to, and the monarch would settle the 'national debt' either through their tax revenue or personally.

nominal terms and real terms. *Figure* 4.1 graphs the available estimates of nominal and real debt, and it is evident that not all estimates agree, partly for technical reasons which I have sought to address by counting all the central government's liabilities as debt[5], but they also diverge for recording reasons, which is why the graphs divide.

Figure 4.1: The British national debt explodes, 1688-1727



Authors calculations based on debt figures from: HoC 13 Dec. 1695; Anon. B 1727; Anon. B 1727b; Anon. C 1729; Smollet 1757; Noorthouck 1773; Playfair 1786; Sinclair 1803; Playfair 1821;Pebrer 1833; HM Debt Office 1898; HM Treasury 1897-1903; Hargreaves 1930 [1966]; Carter 1951, 1953; Kindleberger 1984; North and Weingast 1989; Dataset available on request.

The paper issued by the government backed institutions exploded in the first two decades of the 18th century. The paper was easily transferable and could be used for buying and selling, while private banks accepted these paper debt instruments (such as "tallies" or guarantees on government tax, exchequer bills, East India Company Bonds, and Lottery Tickets, according to Quinn's (2001) review of Child's Bank) as security for issuing their own paper money – like the Bank of England did – or for

[5] Kindleberger (1984: 164) and North and Weingast (1989: 822) both list the national debt in 1714 as £32.6m, but this is because they only include the debts held for the government by the Bank; the two Companies (known as "funded debt"); and the Lottery debts (which was "temporary"). They do not include the rest of the government's liabilities ("Unfunded debt" and other "temporary" debts) in the form of Navy and Army debentures, or other loans. Sinclair (1803: 439) has a useful breakdown of the national debt which clearly delineates through which instrument money is owed.

specie lending. In this manner Britain "used its public debt to expand and integrate its banking sector" (Weir 1989: 95), and in turn facilitated the availability of credit, so important to Defoe's inland trade.

Analysing the records of a reputable London bank, Quinn (2001) shows how the portfolio of collateral against loans and credit shifted toward government and corporate bonds during this period. In the late 17th century, between 1680 and 1690, 0.3% of the loans granted to individuals by Child's Bank were secured by government paper. Between 1690 and 1697 this grew to 1.6%, and by 1698-1705 it was 18.7% - the most used form of collateral in the bank (Quinn 2001: 604).

> The mechanics of private debt was transformed by the dual revolutions in England's systems of constitutional power and public finance. Bankers and their customers began to use the improved financial instruments of the government to facilitate private lending. (Quinn 2001: 613)

As a result of these changes, paper credit in Britain grew in quantity and became more useful as a general means of payment. Paper issued by the government's lenders, and even by reputable banks, stood as collateral for further loans and it allowed credit to be extended on trading accounts. Only a year after the Bank of England's founding the national debt was estimated at £4m (HoC 1695) and it grew to £54m by 1714 (Playfair 1786, Sinclair 1803, Pebrer 1833), and private credit on the basis of the issued paper presumably grew even more. In 1725 the Bank of England was granted permission by parliament to print its first issue of paper money, which gained currency as a form of credit in London first and later throughout the country towards the end of the century (Poovey 2008).

When Defoe discusses the importance of the national debt and of maintaining regular payments to maintain public confidence, he makes no mention of the monarch. This is odd if one considers North and Weingast's (1989) argument that the foundation of debt credibility was the monarch's guarantee to pay. The credibility was of course based on the regular repayment of interest and the guarantee that the debtor was legally obliged to service the debt. But with the death of Queen Anne in 1714, with no immediate heir, it seems that the *royal* promise to pay did not matter as long as there

was *a* promise to pay. So when Defoe does not mention the monarch it is because by then (in the 1720s) it was no longer the monarch(s) who guaranteed the loans of their intermediaries (the Bank and two Companies), as the burden of the national debt was taken over by Parliament which I discuss in the next section. This is important to understand because the primary forum for economic policy debate shifted in the 1720s. It shifted out of the royal circles and into parliamentary debate, where new accounts of the nation's economic wellbeing would be published.

2.1 The National Debt as a Parliamentary responsibility

Understanding the shift in political power structures is important for understanding how economic theory developed in the 18th century. We cannot look to royal favourites and Privy Council deliberations to interpret policy making or understand how the economy is conceptualised. The new power was in Parliament, relatively independent of the monarch's needs, and the challenges to power were also fielded here. Parliament had, as North and Weingast point out, been empowered to oversee all government spending, including the royal budget, since the 1688 Bill of Rights (Lock 1989, William and Mary 1688: §4). But Parliament had never refused spending requests from the monarch until after George I ascended the Throne in 1715. King George I was a different monarch. He was not a seen as a divinely chosen prince because he had been explicitly chosen by parliamentarians. The king left the running of domestic affairs mainly to Parliament, just as his son George II would do (Rowse 1944). Royal Assent, which was the monarch's legislative tool, became more irrelevant, as not a single bill passed in both the Houses of Lords and Commons was refused Royal Assent after 1714. Parliament was taking power, and with power came economic policy responsibility.

The importance and power of politicians grew quickly after 1715. The most senior domestic policy position was the chancellorship of the Exchequer, which controlled government spending, and it first went to Robert Walpole in 1715. Walpole resigned from the chancellorship in 1717 but was brought back again as chancellor in 1721, via parliamentary intrigue, not royal intervention (Simms 2008: 162). Walpole was brought back to restore public confidence in the public debt through "a program of honouring the debt as a *national* debt" (Winks and Kaiser 2004: 61). Winks and Kaiser (2004: 61) further emphasize that "this was a novel concept in an age when

most states treated their debts as the monarch's personal obligation." Walpole sought to take control of the King's debt, and guarantee it as a parliamentary responsibility. His priority was to re-assure the City of London bankers and traders that the paper credit they used as collateral was safe. In the 1722 Commons address, after Walpole's return which made him Britain's first de-facto prime minister (Hill 1989), the speaker in the House of Commons made it clear that the government would

> Grant whatever shall be necessary for the Safety of the Kingdom; being entirely convinc'd, that we can by no other Means restore publick Credit, and enable ourselves to attempt the gradual Reduction of the great National Debt. (HoC 1722, 17 Oct)[6]

Walpole took charge of parliamentary spending (Black 1985, Hill 1989, Black 2001) and recognised that the national debt and the public credit were related. While he responded in the House of Commons to King George's recommendation that the national debt should be reduced (HoC 1722, 9 Oct), his government was happy to simply service the debt - service, but not repay, the debt, because that would reduce the amount of paper bonds in circulation. In 1716 the national debt stood at an estimated £51m (Anon. 1729), and by 1727 it was similarly estimated at either £50.2m (Smollet 1757) or £53m (Anon. 1729). Walpole and his government intentionally maintained the debt but did not reduce it. This is well illustrated by Walpole's choice to divert a fund which could have been used to pay back part of the national debt. After this episode opposition MP William Shippen complained that he

> thought [the funds] had been a Sacred Depositum, reserved for the gradual Discharge of the National Debt: I thought it would have been look'd upon as a Sort of Sacrilege, to have diverted the least Part of it, on any Pretence whatsoever, from its original Uses; and it is as surprizing to me, that the honourable Person [Walpole] should be for destroying his own Darling Project, and that he should be for pulling down the boasted Monument of his Glory. (HoC 3 July 1727)

[6] I have abbreviated *House of Commons, History and Proceedings by Chandler* (1742) to "HoC" for ease of reading. See bibliographic notes for details.

The national debt was Walpole's "darling project" and a "monument of his glory." Walpole, like Defoe, had observed that the national debt related positively to the public availability of credit– as Quinn (2001) and others argue it did in the early 18th century. So Walpole wanted to maintain the level of credible debt and thereby maintain the amount of paper bonds circulating in the economy. By taking charge of the national debt Walpole removed the King's last legitimate reason for imposing direct taxes through parliament. If the national debt was not the King's burden, there was no reason to grant the monarch tax requests, as the debts could be serviced by parliament. As a result, Walpole's government "had a new place in the social, economic and political life of the country" and became *the* legislative authority in Britain (Hoppit 1996a: 125). Parliament had successfully taken power from the monarchy and its economic management would revolve around the national debt and empirical accounts of it.

3. Walpole's use of National Debt accounts

When opposition MP William Pulteney rose in parliament on 17 January 1734 he challenged the government by announcing that "the State of the Nation must be called for" (Cobbett[7] 1811: 198). Historian Brendan Simms (2008: 236) reads this as a request for "a searching formal examination of Britain's declining domestic, international and fiscal position": Pulteney had officially demanded a national account and an overview of the economy. Walpole's response was to present "an account of the National Debt" on 19 February for 1733 and 1734 to show Pulteney and Parliament that the economy was well managed (HM Treasury 1898).

Walpole used these national debt accounts as the government's official reply because they indicated the amount of public credit available to serve demand. Like Defoe, the government would have preferred to gather accounts of the inland trade but, as Defoe made clear, this had been near on impossible.

> I have endeavoured to make some calculation of the number of shop-keepers in this kingdom, but I find it not to be done. It is as impossible likewise to make any guess at the bulk of their trade, and how much they return yearly: nor, if we could,

[7] *Cobbett's Parliamentary History* is a *verbatim* account of House of Commons proceedings. See bibliographic notes for details.

> would it give any foundation for any just calculation of the value of goods in general: because all our goods circulate so much. (Defoe 1738: 189)

Only twenty years earlier Charles Davenant (1712a) had struggled to gather a national import and export balance, and he had the best trained data collectors in Britain (Buck 1982). An annual account of the inland trade would have been beyond the administrative capacity of the government at the time. But it was not beyond them to account for Walpole's "Darling Project" or Defoe's "foundation of trade;" the government could account for the national debt and the public credit guarantee. That said, the government had no need to justify its policy making until challenged in parliament and in public, and this only happened after the death of George I in 1727.*

3.1 Challenges to Walpole lead to public national accounts

Walpole had not been criticised in parliament while George I ruled, but his death made it possible to criticise Walpole openly, as he and George II were not close. Criticisms had to be aimed at Walpole's domestic efforts, as he was not heavily involved in foreign affairs in 1727 (Simms 2008). So the target of political criticism became Walpole's chancellorship and the government's economic policymaking. Indicatively the critics *only* attacked Walpole's treatment of the national debt because that was the measure of his economic policymaking.

To challenge Walpole, at least two estimates of the national debts were published anonymously in 1727 (Anon. 1727, 1727b). These accounts and the surrounding publications were so important, and centred so much on the national debt, that Walpole's contemporary, Tobias Smollett (1721-71), called his *History of England* chapter on George II's first parliamentary gathering the "violent disputes concerning the national debt" (Smollett 1766 [1844: 378]). "The national debt", William Pulteney[8] told Walpole in that first session, "had been increased since the setting up of that pompous project" (HoC 1728, 23 Feb). Pulteney's comments on the national debt elicited "some warm altercation [which] passed between him and Sir Robert Walpole on this subject" (Smollett 1776 [1844: 378]).

[8] Pulteney also argued that deficit spending, through borrowing, would simply have to be taxed in the future so was not beneficial to the economy. "When they deliberated on the loan of the bank, Mr. Pulteney observed, that the shifting of funds was but perpetuating taxes, and putting off the evil day" (Smollett 1766 [1844]: 378) – not unlike the later idea of Ricardian Equivalence.

In this parliamentary session Walpole's government was also criticized for an omission of duty on 'wrought-plate' (or worked metals, usually iron) from the tax accounts in 1728, and as a result the opposition managed to pass a motion that "The Commons in a Grand Committee consider of the State of the National Debt" (HoC 1728, 4 Mar). Every aspect of the government's domestic programme appears to be tied up with the national debt, at least in the mind of contemporary policy makers and observers.

Walpole's dominance in parliament from 1720 to 1727 had kept such accounts from public scrutiny, but now "Mr. W. Pulteney inveighed against such a vague and general way of accounting for the public money, as tending to render parliaments altogether insignificant, to cover embezzlements, and to screen corrupt and rapacious ministers" (HoC 29 Feb. 1728). The "public money" was at stake, the credibility of parliament and thereby the national debt and credit could be jeopardised, so accounts of the economy would have to be made available to parliament.

After another set of anonymous national debt accounts was published (Anon. 1729) MP John Scrope demanded official statements of the National Debts on 7 February 1729, as they stood at year end 1727 and 1728 (HM Treasury 1898: §65). Only four days later, Alexander Chocke, the receiver of the excise (Noble and Granger 1806: 255), presented the Treasury with accounts of the national debts incurred before 1716 (HM Treasury 1898: §71) while Scrope requested additional accounts for the debts up to 1725 on the same day (HM Treasury 1898: §65).

This was not however a victory for the opposition but instead a calculated move by Walpole. The Right Honourable John Scrope MP was not part of the opposition. He was a secretary to the Treasury[9] and therefore Walpole's secretary, not to mention Walpole's uncle. The Treasury Secretaries were confidants of the Chancellor and very influential as their signature "at the end of a letter carried the authority of the treasury" (Clark 1936: 35). On Scrope more personally, a footnote in Cobbett's

[9] John Scrope (c.1662-1752) MP for Ripon 1722-27, Bristol 1727-34, Lyme Regis 1734-39; Secretary to the Treasury 1724-1752.

Parliamentary History (1811: 1196) noted that he was "perhaps the coolest, the most experienced, faithful, and sagacious friend the ministers had. He was greatly trusted in all matters of revenue, and seldom or never spoke but to facts, and when he was clear on his point." When Scrope demanded the national account of debts, as he did several times,[10] we may infer that it was on Walpole's instigation. This means Walpole had decided to let the accounts be public, to let parliament know how he was managing the economy.

Some might argue that it was not domestic concerns that made the British government publish their national debt accounts, as foreign affairs became more complicated. France became more assertive after 1729 (Simms 2008), while Spain's rising power worried Parliament (Black 1985). But after the death of George I in 1727, Walpole had taken a "back seat in the day-to-day running of foreign affairs" (Simms 2008: 212). This was compounded by the death of Walpole's sister in 1727, who was the wife of Townshend, the Secretary of State for the Northern Department responsible for foreign relations with Protestant Europe. Moreover, the typical response to a hostile foreign nation at the time would be increased secrecy not public discussion of the nation's economic health. Therefore I argue that the drive to publish the national debt was not influenced by foreign affairs but was pushed by Walpole's domestic conditions, and it was done to ensure that the government appeared to be tending to the domestic economy as best they could.

After 1729 Walpole oversaw the distribution of national accounts to parliament on an almost annual basis, providing up-to-date figures for discussion in the House of Commons. As the government provided regular national debt accounts, anonymous estimates were no longer published 1730 and economic debates revolved around government figures. *Table* 4.1 shows all the national debt estimates published between 1695 and 1775, highlighting whether they were released during Walpole's time in power; it is an indication of the importance of national debt accounts to Walpole and his government.

[10] Scrope requested accounts for past years on: 7 Feb 1729, 11 Feb 1729, 18 Feb 1730, 18 Feb 1732, 16 Mar 1733, 19 Feb 1734, 19 Apr 1735, 25 Feb 1736, 16 Mar 1737, 21 Feb 1738, 21 Mar 1739, 24 Jan 1744. See *Calendar of Treasury Books and Papers*, Volumes 1-5 for individual requests on each date.

Table 4.1: National Debt estimates published between 1695 and 1775

End of Year	During Walpole	Total National Debt	Source
1695		£ 4,042,376 6s. 7[1]/8d	HoC 13 Dec 1695
1716	Yes	£ 51,640,934 17s	Anonymous B[11] 1727b
1716	Yes	£ 51,068,103 7s 6d	Anonymous C 1729
1716	Yes		HM Treasury 1729
1717	Yes	£ 47,894,950	Anonymous B 1727
1724	Yes	£ 52,363,471	Anonymous B 1727
1725	Yes	£ 51,346,089	Anonymous B 1727
1727	Yes	£ 53,909,112 1s 7d	Anonymous C 1729
1727		£ 50,261,206	Smollet 1759
1730	Yes		HM Treasury 1730
1732	Yes	£ 48,442,655 6s. 1½d	HM Treasury 1732
1734	Yes		HM Treasury 1734
1736	Yes	£ 47,866,598 3s. 3¼d	HM Treasury 1738
1737[12]	Yes	£ 47,855,948 3s. 3¼d.	HM Treasury 1737
1737	Yes	£ 47,185,869 10s. 1¼d	HM Treasury 1738
1740	Yes		HM Treasury 1741
1741	Yes		HM Treasury 1741
1742	Yes		HM Treasury 1742
1753		£ 74,368,451 15s. 1d	Smollet 1759
1760		£ 108,493,154	Noorthouck 1773

Sources: HM Treasury (1897-1903). No value means the calendar notes that an account was submitted for a given year but provides no details of the debt.

In eighty years, from 1695 to 1775, twenty estimates of the national debt were published and 16 of them were released by Walpole's government after the death of George I and the publication of Defoe's *Complete Tradesman* (1726). It is remarkable that the national debt accounts were so timely. Under Walpole the accounts for 1730, 1732, 1734, 1737, 1741 and 1742 appeared at the end of the year for which the account related and they included detailed breakdowns of the debt and bond positions. The debate about the relationship between the national debt and the public credit continued throughout Walpole's premiership, and Walpole appears adamant that the debt should be maintained, not removed. Opposition MP Sir John Barnard complained that the government's budget surplus and savings could be:

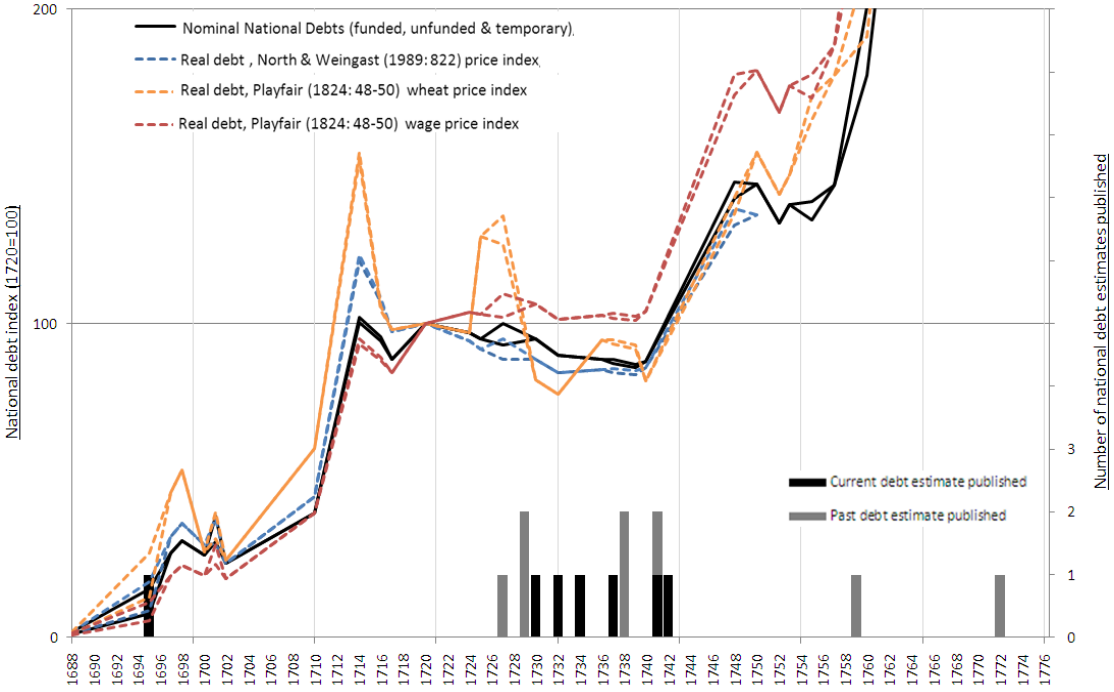
> Applied wholly to discharge the national Debt, and to relieve the People from those heavy Taxes they now groan under... such a Thing can be brought about

[11] This is an estimate the anonymous author takes from page 5 of *A State of the National Debt* (1727) and which he disagrees with. I have not been able to locate a copy or identify its author.
[12] Account accurate as of 2 February 1737

> without any Danger to public Credit, or Breach of public Faith; and that this may in all Probability be done. (HoC 1737, 21 Mar)

Walpole's government does not appear to have been swayed, and the level of the national debt was maintained. *Figure* 4.2 shows an index of the British national debt as it evolved from 1688 to 1775, indexed against its1720 value. This illustrates how the nominal national debt fell over Walpole's time in power from 1721 to 1742, and also fell in real terms going by North and Weingast's (1989: 822) price index. By Playfair's (1824: 48-50) contemporary wheat price index, the real value of the debts had only risen 3%, while his prices relating to wages suggest that the real value of debt had fallen quite substantially.

Figure 4.2: The national debt stabilizes under Walpole



Sources: Authors calculations based on debt figures from: HoC 13 Dec. 1695; Anon. B 1727; Anon. B 1727b; Anon. C 1729; Smollet 1757; Noorthouck 1773; Playfair 1786; Sinclair 1803; Playfair 1821;Pebrer 1833; HM Debt Office 1898; HM Treasury 1897-1903; Hargreaves 1930 [1966]; Carter 1951, 1953; Kindleberger 1984; North and Weingast 1989; Dataset available on request.

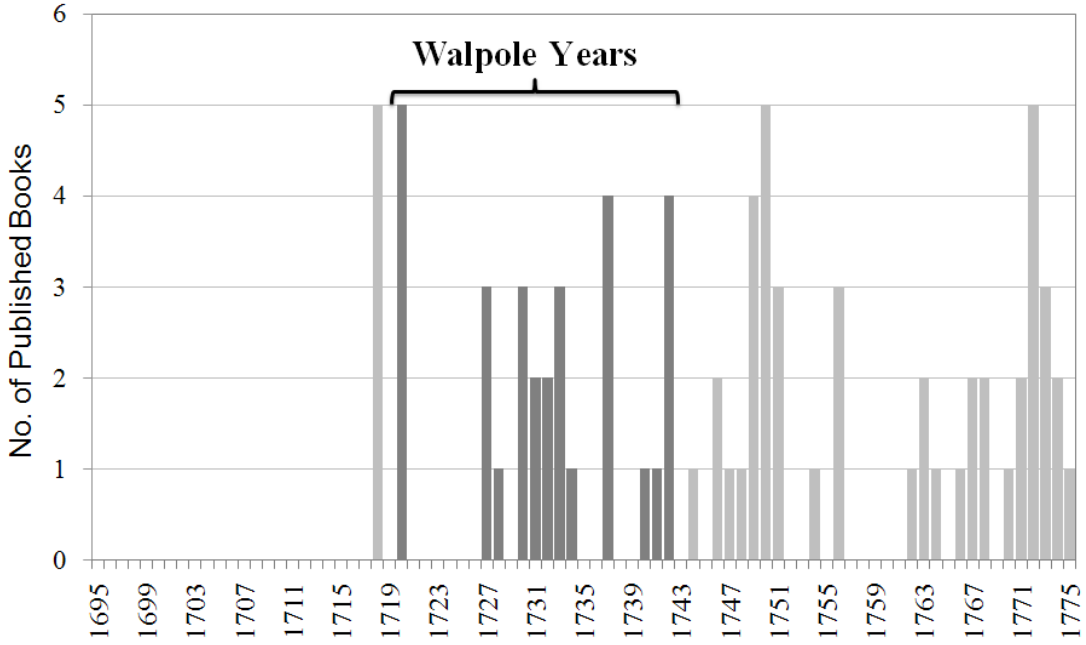
Tellingly, as Barnard recognised, the argument for reducing the national debt or any economic policy had to be phrased in terms of its impact on the "public credit" and the "public faith." An equally telling indicator of Walpole's focus on the national debt as the indicator of the economy's performance is that after Walpole's resignation no more debt accounts were presented in parliament. The final request for a national

account was lodged by Scrope on 24 January 1742, and Walpole resigned two and a half weeks later. I argue that Walpole had presided over a government, and a country, which conceptualised the economy in terms of a continuous flow of goods and services. This flow of goods derived from demand and was based on the ability of traders to access credit. This credit was based on the public faith in the public credit instruments used as collateral against loans, which is why Walpole focussed on accounts of the national debt. Walpole had intentionally not used any of the several hundred other sets of empirical accounts made available to parliament between 1715 and 1744, of which an approximately 19% related to finance and 34% to various other aspects of the economy (Hoppit 1996b: 522). Walpole was interested in the national debt, as was the voting public.

3.2 The national debt only mattered after 1720

I argue that the focus on the national debt started with Walpole's premiership and the publication of Defoe's work. I use what Hoppit (2006) calls the bibliographical contours and context of a period to provide some perspective on this. This is a bibliographic search of publications on a certain topic to understand when a topic becomes so important that books are dedicated to the subject. Similar methods have been used to provide a social context to historical work (Théré 1998, Woolf 2001), and the application here is an overview of the published British books which include "national debt" in the title, summarised in *Figure* 4.3 On the vertical axis is the number of books published in a given year, and the horizontal axis is a timeline from 1695 to 1775. Surprisingly, of all the 461 holdings on national debt in the British Library, not a single one was published before 1718, and the five in 1718 all refer to – or were published by – the South Sea Company in its bid for the government debt. Five volumes are published in the year that Walpole is brought back to address the national debt, and then it is quiet until 1727 when Defoe publishes his work and Walpole is challenged in parliament:

Figure 4.3: Published books with "National Debt" in the title; 1695-1775



Source: British Library Catalogue

This bibliographic record is indicative of how the national debt entered the national consciousness during Walpole's rule. In his 22 years as prime minister, thirty books on the national debt appeared. Prior to 1718, none had been written. This record excludes the appearance of the national debt in the periodicals which had become a mainstay of political life in London by the twenties. It also excludes work on the national debt which does not include the term in the title, so Defoe's frequent re-publications are not included. I would suggest that the bibliographic record lends credibility to my argument that the national debt was important for Britain and the voting population from the 1720s onward.

4. The end of the flow economy

I argue that from 1720 to 1742 Britain was seen as a credit driven flow-economy by its key policy makers and economic thinkers. I base that argument on the economic work of Defoe; the financial and political changes of 1720s Britain; the parliamentary focus on the national debt; and the extensive empirical estimates of the national debt. As I hope to have shown, economic policy was based around this concept of a credit driven economy while policy focussed on maintaining the credibility of the national debt and sustaining its size to encourage the use and circulation of paper credit.

Even after Defoe's death and towards the end of Walpole's time in office, when William Pitt criticised Walpole on 13 December 1741 for failing to increase the "wealth of this country" and having "impoverished the nation" (Cobbett 1812b: 1363), Walpole responded in the House by submitting the national debt account to show that the economy was well managed.

This economy relied on an extensive and growing paper credit system, which North and Weingast (1989) as well as Quinn (2001) and Poovey (2008) emphasise. The paper credit issued by public institutions needed to be trusted which is why the monarchy before 1715 and Parliament who took control after 1715 had focussed on the national debt in the early 18th century. The use of paper credit and currency spread, and by the 1760s, the popular English Arthur Young, discussed in chapter eight, observed that the English made all their domestic trades with paper notes, not specie (Young 1769: 421). Young's statement was based on his own extensive travels in England. He posed a rhetorical question to the reader: How could a country like France, which had twice the treasure of Britain, keep losing wars to its smaller and specie-poorer neighbour? The answer for Young was:

> One country [France] seems to be in want of common wealth, and the other [England] disgourges its guineas All over Europe – All, all is publick credit, and paper – the most amazing structure, the wit of man ever erected!
> (Young 1769: 417)

> The paper currency alone, of the latter [England], amounts to three hundred and fifty millions sterling, including the national debts: the whole may be even called really current, because it is as easily transferred from one person to another as gold itself. (Young 1769: 419)

"The most amazing structure, the wit of man ever erected" was what facilitated the English inland trade. For Young, paper money (including the government bonds and other credit instruments) had revolutionised Britain and allowed Britain to finance successful wars against a seemingly wealthier and stronger neighbour. Young was careful to distinguish between the term "cash" or metallic money and paper "notes", which were "the signs of money" (Young 1769: 422). It was the latter, the signs of

money, the paper money or credit notes, which had helped Britain grow economically. The circulation of such credit money corresponded in value to the goods and services available, so the wealth of Britain was much higher than France.

Despite these allusions to what had been Defoe's and Walpole's concept of the economy, Young does not mention either of them. Young's failure to refer to Defoe, Walpole, or any of the debates from the 1720s and 1730s has a lot to do with the changes in Britain and British economics after Walpole's resignation. The frequent omission of the period from 1700 to 1775 in the history of economics, and the infrequent mention of Daniel Defoe and Arthur Young, are both symptomatic of the historical narrative where mercantilism, as defined by Adam Smith, dominated British thought in the 17th and 18th century – a narrative I hope to have challenged.

I briefly mentioned that after 1742 the government stopped issuing national debt accounts. What the next chapter explores is how, after 1742, there was an almost complete fragmentation of British politics along political, religious and social lines all at once, and how this shaped the economic discourse, as well as the economy which came to dominate discourse. Walpole had been a strong Prime Minister, running the nascent British democracy through 20 years of relative peace. After his resignation the renewed threat of a Stuart heir to the throne and religious upheavals coincided with two long wars and thirty years with no single vision of the economy. With that loss of economic direction, the arguments over economic policy making became ever more muddled. It is in that political chaos that the theoretical reasons for Britain's extensive paper credit system were forgotten. The paper credit system persisted in facilitating the inland trade and helped Britain win the wars of the 18th century, but economic policy advisors were now challenged by a new theoretical influence: academics and scholars. During the tumultuous years between 1740 and 1770 many historians of economics today see the first signs of a debate which attempt to define an economy. The next chapter will argue that the only reason authors like Schabas (2005) or Hoppit (2006) see an economy emerging in the 1760s is because of a focus on academic authors. In the writings of the then policy advisors, merchants, periodical writers and industrialists, these scholars were trying to displace them and that might explain part of why the scholars neglected to cite other, often influential, economic writers.

Whether intentional or not, the scholars would slowly take over the policy advise function in British politics.

Chapter 5

Political fragmentation breaks empirical economics, 1740-1780

> The Mathematician and the natural philosopher... may amuse himself and his Readers, with airy Speculations, or furnish just Matter, to a devout Mind, for praise and Adoration of the Great Creator; but the Merchant, by his Art, brings down their Services into common Life
>
> -Andrew Hooke (1750: iv)

The second half of the 18th century is portrayed by Schabas (2005) and others as a time when economics and the economy as a concept emerge on a wave of secularism following the dark ages of mercantilism. Just as I have argued that there was no dark age but a deep and exciting empirical literature from 1700 to 1750, I illustrate how there was no sudden emergence of the concept of an economy in the late 18th century. Indeed I show that there was an economic debate from 1740 to 1780 and its focus was on the definition and measurement of the economy. I argue that the economics Schabas (2005) and Hoppit (2006) see as emerging toward the 1770s is actually the emergence of a more familiar *authorship* on economics. They note the familiar scholarly authors who discuss economics, but miss the forgotten traditional policy advisors, who were writing and calculating throughout the century. These merchants, industrialists and other non-scholars were trying to maintain their policy influence, and this is why the industrialist Andrew Hooke was so keen to point out that merchants addressed the "common life" while the academic Doctors of Divinity offered nothing but "airy speculations."

To make this argument I first need to illustrate the impact that politics had on economic discourse and the waning impact policy recommendations had as parliament itself fragmented. To do so, I juxtapose two early publications; supposedly by the same author – Matthew Decker – to show how quickly economic arguments would change to follow the political agenda. Secondly, I need to show that, despite the politics, empirics still constituted the basis of economic policy advice. I also need to highlight how the industrialists and merchants became ever more frustrated with their declining policy impact. I use the national accounts of the time to draw parallels

and explain the social context. The secondary literature on these national accounts is almost non-existent, as they are assumed not to have existed or to be of little analytical use. Making the case requires a somewhat detailed exposition of the primary sources. But this then ties together a larger narrative of English and British economic discourse in the 18th century, without the need for a sudden emergence of economics in the 1780s (Gordon 1991, Schabas 2005, Hoppit 2006) or some transition from a doctrine of 'mercantilism' to *laissez faire* (Heckscher 1994). Both positions I contradict.

What I propose, instead, is that this period from the 1740s to the 1770s was characterised by the deterioration of consistent theories to define the economy. Policy makers who governed for longer periods like Walpole (1720-42) or Queen Anne's Tories (1702-1714) had held definitions of an economy for which they made policy and against which they measured progress. From the 1740s onward, no single concept of the economy held sway, as parliament fragmented and governed without a clear leader for extended periods. Rather than a consistent economic doctrine, it was the social fragmentation, rising religiosity and shifting powerbases that provided numerous alternative definitions and accounts of the economy.

1. Political fragmentation changes the economic debate

One year after Walpole's resignation, a short book entitled *Serious Considerations on the several High Duties which the Nation in general labours under* (1743) made the case to overhaul the British tax system. Its popularity is probably best gauged by considering that it reached its fifth edition within only one year. The book was written by Sir Matthew Decker, MP for Bishop's Castle, who was also a governor of the East India Company and host to King George II on occasion.[1] Decker was not named on the cover of the book until the two editions published in the 1750s. His name is ubiquitous in the historiography of national income estimates (see Giffen 1889, Deane 1955, Studenski 1958, Tily 2009) because an earlier, less popular, book has since been attributed to him. I write less popular as the 1740 *Causes of the Decline of the*

[1] Sherwin (1953: 407) writes: "At his splendid mansion and garden on Richmond Green he entertained the king. A pineapple (or ananas), said to have been the first ever raised in England, was part of the banquet. A painting was made of the pineapple with a Latin inscription beneath it stating: 'This Pine-apple, thought worthy of a royal feast, was raised at the expense of Sir Matthew Decker, and produced by the skill of Theodore Netscher, Esq'."

Foreign Trade would be re-published only once, in 1744. Because it had a very brief estimate of national income and Adam Smith referred to it explicitly (1776 VI, v.a: 20), this volume appears in the historiography of national accounts as one of the supposedly few empirical works from the 18th century. Problematically for the authorship claim, the arguments and ideas in the 1740 book were contrary to the 1743 publication, and the two 1744 publications carry completely different empirical content. I argue that the abrupt difference between Decker's two books highlight the character of the literature on the economy in the third quarter of the 18th century in Britain and illustrates its rapid fragmentation.

Decker's popular 1743 [1744b] book contained the recommendation that Britain would be better off replacing all its taxes with a single progressive property tax and a usage tax on luxuries. The property tax should range from £10 to £100 per annum and exempt the poor. Decker suggested this to promote "the trade of Great Britain" (Decker 1743 [1744b: 12]). Decker's use of "trade" has since been interpreted as the foreign trade only by histories of economics that assume 18th century economic thought was based on the textbook presentation of mercantilism. This interpretation leaves Decker open to the suggestion that his prime concern was the balance of trade, leading Magnusson (1994: 155) to label him a mercantilist. Sherwin even suggests that, by addressing the external trade balance Decker was aiming to raise enough money so that "the public debt of five million would thus be eliminated" (Sherwin 1953: 400).

Sherwin's expression of Decker's intent is, in my view, a mistake in Sherwin's otherwise excellent paper on Decker's life and work, which is the only detailed work on Decker other than encyclopaedia entries. The problem with Sherwin's account is that as late as 1737 the national debt, according to public parliamentary records, was more than £42m (HM Treasury 1897-1902). In 1739 the annual interest payments on the debt stood at two million pounds (Colquhoun 1814: 274), so the debt did not by any means equal five million pounds as suggested by Sherwin. Decker, the MP and director of the East India Company, would have been aware of this. Furthermore, the international trade interpretation of Decker's tax proposal is questionable, as his intention was to tax land, not trade flows (Decker 1743 [1744b: 12]). The tax

revenues themselves were intended to maintain the interest payments on the national debt, ensuring that they were the first expense parliament paid in each session (Decker 1743 [1744b: 22]). On that basis, Decker's intent is more reminiscent of Walpole's priority in parliament, only a year after Walpole had resigned.

The idea of Decker as a textbook mercantilist is primarily based on the first book attributed to him (Decker 1740 [1744a]). First published in 1740, it concerned itself explicitly with the external trade or the *Decline of the Foreign Trade* as in the title. The title of the 1743 book, on the other hand, indicates that the book will address the duties on *the Nation in general, as well as Trade in particular… discharging the trader from any search and raising the public supply* (1743 [1744b]). In this later book Decker was looking at the 'trader' much as Defoe (1738) had, and Decker analysed the government's ability to maintain the public debt in much the same way as Defoe and Walpole. In 1743 Decker argued that all sales taxes on domestic and international sales should be removed. This would reduce the cost of policing traders, warehouse owners, retailers and importers, while lowering the cost of necessities for the poor as a sales tax restrained the flow of trade. When introducing these policies politicians should consider the:

> Positive actual Advantage it will bring; to the *East India* Company; to the Merchants; to the Consumer of goods of all sorts; to the Public Funds; and in short, to the Nation in general, as well as to the most useful (tho' at the present most unhappy and most burthen'd Part of it) the Poor. (Decker 1743 [1744b: 29])

Decker's appeal is for the nation to benefit in general by improving the "public funds," maintaining the consumer and merchant while focussing on the mass of people, even the poor. Decker does not say the poor are a drain on the economy - quite the opposite; he calls them the "most useful" members of the nation. Why? Because they were the labourers and consumers who demand goods and services, unlike the merchant who is simply satisfying such demands – an argument again reminiscent of Defoe (1738). An advantage to the public fund was achieved by parliament guaranteeing to pay the interest so the national debt was maintained. Just as Walpole and Defoe argued, the public credit and confidence in state issued paper was maintained. Similarly, an advantage to the East India Company was an advantage

to public credit, as its shares were being used as "signs of money" (Young 1769: 422) and collateral for bank loans at the time (Quinn 2001: 604). The lower prices would in turn be good for the consumers and the merchants, and especially the poor, who would have a higher disposable income from the tax cut. All of this added to the benefit of the nation or the economy.

Sherwin (1953: 403) draws a parallel between Decker's and Walpole's policy arguments – without considering Walpole's definition of the economy. Walpole had wanted to remove duties and taxes on the "carrying trade" and the importation of foreign goods (Sherwin 1953: 403). In place of a sales tax, Walpole championed a consumption tax on luxuries like tea, coffee and chocolate to leave the carrying trade with as few duties as possible (Dowell 1884). This suggests to me that the Decker who published a very popular book in 1743 on tax reform looked at the economy in similar terms to Defoe and Walpole. Decker would have been exposed to Defoe's and Walpole's ideas, as he joined politics in the 1720s and grew up in the periodical culture of the 1710s. He had also served as a governor of the East India Company, so would have had first-hand knowledge of the way that the company's shares and bonds served as collateral for loans. The Decker of 1743 was not, I contend, a mercantilist – however that is conceptualised – and the popularity of his book reflects, I believe, a wider acceptance of Defoe's and Walpole's definition of the economy.

1.1 Matthew Decker's apparent conversion

Where Decker's 1743 volume had addressed the nation in general, the 1740 volume only addressed itself to the apparent *Decay of the foreign trade*. This 'mercantilist' Decker had little regard at all for the public funds, except to advocate the complete repayment of the national debt, which was suddenly "computed by some at 12 millions" (Decker 1740 [1744a: 66]). Recall that this is the second edition published in 1744, at the same time that his other book is re-published, but the figures for total debt of £12m and an annual repayment target of £5m seem quite disparate. His main proposal for a new tax system was now a voluntary system of taxes on luxuries in use – a form of licensing – set at a fixed percentage where early payers would get a discount (Decker 1740 [1744a: 149]). People should be given licenses and be charged for the use of luxuries like "using Silver Plate for their Sideboards or Tables" and "wearing Jewels in Rings or ear-Rings" among other things (Decker 1740 [1744b:

77]). In 1743 Decker had suggested a progressive land tax and a sales tax on luxury retailers; now he wants to charge people for using their own cutlery.

Such internal inconsistencies made Gonner (1908) question whether the anonymous author of the 1740 book was the same as the anonymous author from 1743. While the *Nation in General* (1743 [1744b]) came to carry Decker's name after the sixth edition, the *Decline of the Foreign Trade* (1740 [1744a]) never did, at least in Britain.[2] The mercantilist label that is so actively applied to Decker in the history of economics comes from the initial focus given to the balance of trade in the 1740 book:

> If the Exports of *Britain* exceed its Imports, Foreigners must pay the Balance in Treasure, and the Nation grow Rich. But if the Imports of *Britain* exceed its Export we must pay Foreigners the Balance in Treasure, and the Nation grow Poor. (Decker 1740 [1744a: 7])

> The Barometer of the general Trade of a Nation is its Mint, if plenty of Treasure is brought in, and little carried out; part of it will be continually coining, and much new Money will appear. (Decker 1740 [1744a: 9])

Decker's economy of 1740 was a specie-focused, goods-exporting economy. To estimate the national income, from which the taxes could be derived, this Decker borrowed statistics from the *British Merchant* (1713-21) and extrapolated them. The following passage earned him a place in the history of national accounting, and cemented the idea that the period was dominated by supposedly mercantilist thinking, as his was the only worthwhile empirical work at the time, according to everyone from Giffen (1889: 88) and Studenski (1956: 41), to Adam Smith himself (1776 VI, v.a: 20):

> With regard to our Expences: The *British Merchant*, vol. 1. p. 165, computes our People at Seven Millions, and their Expences at 7*l. per* Head; but as Necessaties are grown dearer since the year 1713, when he wrote, and the Number of People increased, I shall compute the People at Eight Millions, and their Expences at 8*l.*

[2] The Irish second edition did name Matthew Decker on the front however.

> *per* Head, which makes out Total Expence annually £64,000,000. (Decker 1740 [1744a: 39])

Using the *British Merchant* figures, Decker estimated the national expenditure at £64m. While both Giffen and Studenski accept the estimates as "slightly better" (Studenski 1958: 41) or that they compare "not unfairly with the preceding estimates" (Giffen 1889: 88), this account is problematic on several levels.[3] First, the *British Merchant* (1743) had estimated an economy like Davenant's (1695, 1698, 1712), where private income, net export earnings and rents equalled national income. It is not clear whether Decker's mercantilist 1740 economy had a national stock concept, but his focus on gold circulation as national wealth indicates that the relationship was not clearly thought through. For empirics, Decker said he had used the *British Merchant* figures, where national expenditure was £7 per capita, but according to the *British Merchant* expenditure was £6 10*s* per capita (King 1743: 189). Decker had copied the lowest estimate of the national income, which ranged from £7 to £7 1*s* 14*d* (King 1743: 170). For the *British Merchant* the national income equalled the national expenditure plus the affordable increases in the national stock – "superlucration" in Davenant's terms (1698a: 195). These distinctions and concepts are wholly lacking in Decker's book.

Adding to Gonner's (1908) original suspicion that the two books were not both written by Decker is the different population estimates and very different empirical methods applied in the two Decker books re-published in 1744. In 1743 Decker used the property tax figures to estimate the number of houses, from which he calculated that the population was 8.4 million (Decker 1743 [1744b: 13]). In 1740 he had simply extrapolated the *British Merchant* 1713 figures. More curiously, as Adam Smith (1776 IV, vii.c. 22) pointed out, how could a governor of the East India Company believe that trade was in decline in the 1740s? Surely Decker understood that the trade with the colonies had grown so large that there had to be some negative effects on other parts of the foreign trade, but that the trade in general had grown? Giffen (1889) followed Smith in saying the 1740 book should be attributed to Decker, a position

[3] Studenski, who was otherwise very thorough in his seminal work on the history of national income, seems to have relied entirely on Giffen's (1889: 86-9) interpretation of the period from 1713 to 1770.

echoed by Gonner, after he changed his mind on authorship (Gonner 1915), and Sherwin (1953). Adam Smith would hold up books like *Decay of the Foreign Trade* (1740) as part of his attack on mercantilists, so it might have served Smith's purposes to include the book as written by a reliable author.[4] Fauquier (1757) and McCulloch (1815), like Gonner (1908), question the authorship, suggesting a "Mr. Richardson" as the original writer, but they provide no further detail. This debate cannot be resolved on the current evidence, and it may never be resolved. But that is of less consequence to my argument, because it is exactly the rapid change of mind and the distinctly different treatment of the economy which reflects the political fragmentation that occurred after Walpole's resignation.

1.2 Decker and Political impact

If Decker wrote both books, his sudden change of mind could be explained by his intention to influence politics. Parliament was no longer a two-party system but had split across every line possible. Simms (2008: 324-5) suggests that there was an immediate division within the Tories of the 'patriot English' and the 'Hanoverian English' who disagreed on whether King George II should maintain close relationship with his German land holdings. This was compounded by conflicts between rural and urban, court and country as well as Tory and Whig, all of which Walpole had negotiated successfully in the late 1730s. McCloskey (2009a: 34, 2009b: 120) notes that this fragmentation occurred across Europe, but its effect on British political decision making, according to Simms (2008), was to make the nascent democracy indecisive. Where Walpole's leadership provides historians with a guide as to why certain policies were pursued in the 1730s, the decision process of parliament in the 1750s and 1760s remained a puzzle until Namier's seminal work (1929). To explain policy making during the post-Walpole period, Namier analysed the background and situation of each Member of Parliament, asking 'who is this MP?' and 'what does he want?' Parliament had gone from being a unified, or at least dual-party, legislative authority in 1720-40, to one with as many factions as there were representatives. The economic advice followed suit.

[4] Smith refers to Decker as "an excellent authority" in the *Wealth of Nations* (1776 VI, v.a: 20).

If Decker, who was a Tory, was trying to criticise Walpole's Whig ideas in 1740, then an attack on Walpole's economic principles makes sense. The eventual war with Spain in 1740, and the preceding frustration with Britain's lack of response, had resulted in a "national ignominy" (Simms 2008: 267). When the Tories then came to power in 1742, they did not change the policy direction which Walpole had set – much to the ridicule of Whig politicians (Simms 2008: 315). So it makes sense for Decker to write a book following the 'new' economic ideas of the Tory party after 1742 – which were the same as the previous Whig administration's ideas. If Decker wrote both books, he may have been inconsistent in his economic reasoning but, in trying to have an impact on policy, the books follow the prevailing Tory policy thinking on domestic issues very well. If Decker did not write both books, they still represent exceedingly timely publications in terms of the Tory Party economic policy stance.

When Horsley (1744) criticised the *Nation in General* (1743) he focussed on the fact that Decker advocated the removal of the import tariff on the East India Company's commodities. He even accused the company of having already applied to "a certain minister" to pay their import duty immediately but had instead been fined an additional £25,000 which the company refused to pay (Horsley 1744: 3). So Horsley suggested the book was purely driven by commercial interests – another division present in parliament, as groups of politicians had stakes in the various state monopolies. 13 years later Massie (1757) criticised Decker's 1743 tax in a book called *The proposal commonly called Sir Matthew Decker's scheme for one General Taxation upon houses laid open* (1757). Massie was "far from thinking the Scheme would promote the Trade and Welfare of Great Britain" (Massie 1757: 1), meaning the 1743 book was still being discussed when it appeared in its seventh edition in 1756. Massie addressed the scheme laid out in the 1743 book but then accused Decker of confusing the profits of merchants with that of the nation, saying he must:

> Distinguish between the profit of the *Merchant* and the Gain of the *Kingdom*, which are far from being always parallels. (Massie 1757: 76-7)

Massie, who was an early collector of economic literature (Hoppit 1996a), cited Josiah Child's *New Discourse of Trade* (1693) as the source of this idea. Massie

argued that Decker had wholly misunderstood the relation between international trade and the economy. He proceeded to give an estimate of the national income, following the definition and method of King and Petty, to show how bad Decker's property tax would be. Massie (1757: 88) estimated that the population of England – not Britain given the estimate – was six million people, and that they each earned approximately £8 per annum. As a result "the incomes of all the people in England only, will be *Forty-eight millions of Pounds a Year*" (Massie 1757: 88). This is where Massie's critique becomes complicated in the context of its time.

If Massie was attributing both books to Decker, he had every right to attack Decker as misunderstanding the economy. Massie seems to have defined the economy in the same terms as Petty (1662, 1676) and King (1698 [1801]), although to get to King's ideas he would have had to read Davenant (1695, 1698), as King's writings were only available in Davenant's books by the 1750s. Massie had definitely read the *British Merchant* (Massie 1757: 118-9) and probably had a copy of Davenant's work in his extensive collection (Hoppit 1996a). It is therefore not clear whether he considered foreign trade as part of the economy, as he did not mention it explicitly. It is likely that he would have done so, but regardless of this, Massie's economy was founded on the incomes from land and labour, and possibly net exports. Massie's objection to Decker is an indirect rejection of any mercantilist thinking (as is present in Decker's 1740 book) and a critique of Decker's property tax proposal (1743) and the effect it would have on an economy earning £48 million per annum.

Confusingly, Massie did not mention the 1740 estimate of national income of £64m, to which he fairly could have compared his own estimate of £48m. Moreover Massie only talks about the property tax proposals from 1743 and never the luxury licensing of 1740. So perhaps Massie was only criticising the 1743 book, which by 1757 had been publicly attributed to Decker, unlike the anonymous 1740 *Decline of the Foreign Trade*. If this is the case, then Massie was reading into Decker an economy which did not make any sense to him.

Why should lower tariffs on imports and a land tax encourage more national income? Income was derived from land and labour (and possibly net exports) from the

perspective of Petty, King and Davenant. So imposing a tax on land and making imports cheaper would only encourage the export balance, which, according to the *British Merchant* and others,[5] formed such a minor part of the nation's income. To Massie, Decker's proposal made no sense in terms of the economy put forward by Petty, King, Davenant or the *British Merchant*, which Massie hastily combined. The economy which Decker in 1743 had used as his starting point for the tax proposal was the economy he had debated in parliament under Walpole. It was based on Defoe's flow of internal trade, supported by credit. It appears that this economic theory had been forgotten by 1757, as the argument in its totality makes no sense to Massie who could be considered an authority on economics at the time, given his collection of economic tracts (Hoppit 1996a).

This does raise the question of who Massie was submitting his protests to in 1757? Decker had been dead for eight years and could hardly be expected to respond. Massie was addressing his concern to politicians in 1757. Parliament was again controlled by the Whig party, but there were two politicians serving simultaneously as prime minister[6] while fighting the Seven Year War (1754-63). Massie's objection seems to have gone unnoticed, but then again, Decker's proposal never became policy, so perhaps Massie's work was noted but not implemented. The political fragmentation makes it hard to interpret what happened, but there can be little doubt that Massie was playing a political game, as had Decker before him. The break-up of parliament and the complications of politics meant that the influence of any single merchant was waning.

2. The contribution of professionals

Economic historians have suggested that the political fragmentation in Britain and across Europe allowed businesses to pursue their objectives relatively undisturbed (Baechler 1975, Jones 1988, Macfarlane 2000) and that this partly explains the lack of economic literature during these years. As I continue to argue in this section, there was no shortage of economic and empirical writing during this period. Numerous

[5] Davenant estimated that the Balance of Payments contributed 12% of total national income (1695: 121) while the *British Merchant* estimated that net exports to Britain's largest trading partner at the time was only 4% of the national income (see chapter 3, section 4.2).
[6] The title of 'prime minister' was not official, but William Pitt and Thomas Pelham (Duke of Newcastle) are usually described as the leaders of parliament during this time.

empirical submissions were made to parliament and the public from 1740 to 1780, and the authors were industrialists and professionals who did not want to be left alone: they wanted to affect policy. I present the national accounts of three authors in order to give a picture of the economic discourse during this period. I believe that these accounts, in addition to the work of Massie and Decker, give a clear indication that the period was empirically interesting and rigorous by the standards of the time. I dwell on the work of the industrialist Andrew Hooke[7] (1750) who adopted part of Newton's physics to make his empirical argument. This episode leaves a question mark by Schabas's (2005) notion that there was an adoption of better methods and secularisation of economics only after 1776, because Hooke takes the latest maths and applies it free of any religious consideration. While these authors are not consistent in their definitions of the economy, and even if the theory sometimes appear rushed – probably due to political pressures – there is a common theme of providing empirical analysis of the economy. These authors were not full time scholars but professionals and businessmen who wanted to analyse the nation and provide policy advice, just as they had for the last century.

2.1 The anonymous professional of 1746

In 1746 an appeal was addressed to the leader of the country, where it was suggested that Prime Minister Henry Pelham was held in such a high esteem that he could get new tax legislation passed. The appeal was based on the notion that the current tax system was hurting the national ability to invest in stocks and fight the war. Published anonymously, the author argued that the current tax system was "a Custom begun in bad Times, supported by bad Men, and founded upon bad Principles" (Anon. 1746: 87).

This was not just a letter but a tract submitted by a professional author, perhaps a lawyer or an MP. I refer to the author as a 'professional' as there are numerous references to parliamentary debate and documents in the submission (Anon. 1746: 10). He includes detailed descriptions of the housing arrangements of the judges and sergeants-at-arms who reside in Serjeants Inn in Chancery Lane (Anon. 1746: 14-15) as well as explanations of the workings of Inner Temple and the expenses and tax

[7] no relation as far as I can tell, to the polymath Robert Hooke (1635-1703)

filing of lawyers (Anon. 1746: 22). This indicates to me that the author was a professional, probably working in and around Westminster. His focus was on the "Trade and interest of his country" (Anonymous 1746: 3) and the national income was defined quite specifically:

> What I mean by National Income is, all the whole body of our People get or receive from Land, Trade, Arts, Manufactures, Labour, or any other way whatsoever; and by Annual Expence I mean, the whole that they spend or consume; and I lay it down as a Rule certain, that if our Annual Income is equal to our Annual Expence, we need never borrow. (Anon. 1746: 28-29)

The national income is the total income received by the "whole body of our People" from land, trade, and any type of labour. The difference between the national income and expenditure makes up both the taxes and the investments made by people and the government, or superlucration (Anon. 1746: 23). From that initial definition, the author provides a very detailed national income account, with a proposal for a new tax system, where income is taxed at 10% with lower rates for low income families.

Table 5.1: English and Scottish national income of £73.6m in 1746

Families		Annual Income	Taxes
250,000	Owners of Lands and Buildings	22,000,000	2,200,000
	Ditto as Occupiers of half the lands	4,500,000	450,000
250,000	Farmers of the other half	4,500,000	450,000
60,000	Handicrafts earning 50*l*. of upwards	3,000,000	300,000
70,000	Ditto earning 30*l* or upwards	2,100,000	175,000
90,000	Ditto, earning 20*l*. or upwards	1,800,000	90,000
70,000	Retailing Shopkeepers at 50*l* each	3,500,000	350,000
3,000	Eminent Merchants	1,800,000	180,000
12,000	Lesser Ditto	3,600,000	360,000
30,000	Owners, Officers, and Traders at Sea	3,000,000	300,000
25,000	Monied Men	2,500,000	250,000
12,000	Officers, Place-Men, Pensioners, &c.	2,400,000	240,000
10,000	Lawyers of all sorts	2,000,000	200,000
18,000	In Liberal Arts and Sciences	1,800,000	180,000
600,000	Labourers and Poor Men	6,000,000	0
1,500,000			
	Casual Profits not reached by this Tax	1,100,000	0
		65,600,000	
	Two Millions of Servants and Journeymen-Bachelors		500,000
	The additional Duty about		300,000
	The Excise to be continued about		1,500,000
	For Scotland	8,000,000	675,000
			8,700,000

Source: Anonymous (1746: 40)

The national income account imputed a rent for owner-occupied housing and set out the economy in terms of wages from all professions including "Painters, Poets, Virtuoso's, Mathematicians" and so forth (Anon. 1746: 34). The national income of England adds up to £65.6m, and Scotland added £8m. The author argued that the current tax system was unfair and inefficient because the land tax reached a third of the nation's income (similar to Davenant's 1698 claim) and was levied on less than a third of the population. The annual income column was calculated to address the more pressing concern: "I hope it is not yet too late to examine our Strength, and see how much an equal Taxation may fairly raise within the Year" (Anon. 1746: 8). The author proposes an income tax of 10% on all incomes, with lower taxes for low income manufacturers and labourers (£20-£40 p.a.) and exceptions for the poor and middle-income workers with more than three children (Anon. 1746: 39). This system would raise £8.7m if imposed nationally, and would be more efficient than the current

system. To re-assure the reader that this is affordable, he also provides a national expenditure account, divided by nations, including all taxes in the expenditure.

Table 5.2: Population and total expenditure for 'our islands', 1746

	Population	Per capita Expense	Total
England	8,200,000	£8	65,600,000
Scotland	1,600,000	£5	8,000,000
Ireland	2,700,000	£4 10*s*	12,000,000
Total	12,500,000		85,600,000

Source: Anonymous (1746: 30-31)

The economy was one where tax revenues competed with superlucration for the difference between national income and expenditure. It appears to include the foreign trade, through the incomes of 'Owners, Officers, and Traders at Sea', as well as the service industries, and is reminiscent in its logic of *British Merchant* (1713-21) or Davenant (1695, 1698), who had also opposed a land tax on exactly the reason that it only reached a third of the population (1695: 122). While the impact of this submission seems to have been minimal in terms of legislative change, it should be considered on its own merit as a piece of economic analysis. It is empirically clear, and it sets out a definition of the economy reminiscent of past attempts, although with a modification on how national stocks could be accumulated. It is an economic and empirical piece of analysis provided at a time where the literature assures us empirics and economic logic is thin on the ground. Most importantly perhaps, its empirical estimates would be substantiated a few years later by another professional, the industrialist Andrew Hooke, to whom I now turn.

2.2 Andrew Hooke and Newton's ratios

Andrew Hooke was a newspaper, periodical and book publisher who had been involved with publishing industry since the early 1700s (Wilson 1965). I believe he was based in Bristol,[8] where he claimed to have facilitated the construction of a trading exchange on the instruction of John Foy, the "master" of the project and the eventual mayor of Bristol in 1747 (Hooke 1748: viii). The Bristol Trading Exchange was finished in 1743, and while Hooke's role in its construction is not clear, the names he refers to as his supervisors suggest Hooke was involved in a senior

[8] On the basis of his first book *Bristollia: or, memoirs of the City of Bristol* (Hooke 1748)

position.[9] I think we need to consider Hooke's credentials before we accept Giffen's scathing attack on Hooke, describing the 60-page book as a "pretentious pamphlet… [and] a most curious essay altogether, and of a kind to bring all such essays into disrepute" (Giffen 1889: 88-9). As a result of Giffen's disbelief in Hooke, Studenski (1958), who appears to base his interpretation of the period 1715-70 wholly on Giffen otherwise, did not add this estimate to his history of national income.

Hooke presented his work to contradict a policy and politics periodical article in the *Westminster Journal* by Thomas Touchit (Warner et al. 2000: 621). Touchit predicted that the country could go bankrupt if the national debt rose by another £20m to £100m, but Hooke disagreed. Hooke instead suggested that "abstract reasoning" was required to understand the national debt properly (Hooke 1750: 3). By abstract reasoning Hooke meant mathematics and the idea of constant ratios – borrowed from Newton – to create a "critico-political survey of the internal state of Great Britain… [to establish the] intrinsic value of that part of his Majesties dominions" (Hooke 1750: iii).

For Hooke the businessman, the national debt was simply the liabilities column of the nation's account, and Hooke argued that the periodical and other lobbyists had failed to properly account for the asset side of "the national stock, real and personal" when evaluating the economy (Hooke 1750: 4). He criticised Touchit for confusing stocks and flows, and argued that if one added up the assets of the nation and compared it to the national debt, it was clear that a national debt of £100m was sustainable.

Hooke defined the national stock as the coin in circulation, land value and personal stock, which included everything from assets to the "stock in trade", "stock for consumption" and even live-stock (Hooke 1750: 5). Hooke set out to estimate the national assets built up from the superlucration of Petty and Davenant, both of whose work he used (Hooke 1750: 9, 10, 14-17). To do so Hooke needed estimates for the value of lands, specie and stocks.

[9] The people Hooke worked on the exchange for were: John Foy, mayor 1747-8 (Bristol City Council 2009); Richard Farr Esq. ('Warden') mentioned in Morgan (1993: 123) as a Bristol-based merchant, trading with America and the European Continent and mayor of Bristol in 1763 (Bristol City Council 2009); and Mr. William Bowen ('Warden'), on whom I could find no additional biographic material.

To estimate the income from land Hooke used the Treasury's land tax records. The land tax was 20% and the tax had yielded two million pounds per annum.[10] Hooke argued that there was so much tax evasion and undervaluation of land that only half of the income yielded by land every year was being taxed. If there had been no tax evasion, Hooke would have expected the income from land to be £10m (as £2m was 20% of the £10m return), but with his tax evasion estimate he valued the land at £20 million. This was an adjustment Giffen (1889: 89) agreed with and called "the only solid fact" in all of Hooke's estimates.

To get the value of the land itself, Hooke estimated the 'years purchase' on land – a common method at the time, where land was valued by its expected returns. For example, if a piece of land was expected to yield £100,000 per annum, then the value was found by multiplying the annual yield by the number of 'years purchase'. Hooke estimated that there was 18 and a half years purchase on land in 1749. With 18.5 years purchase and our hypothetical land yielding £100,000 per annum, the value of land in this calculation would be £1.85m, or inversely, Hooke had calculated that the rate of return on land was approximately 5.4%.[11]This purchase price was a historically low but not unreasonable as Schmidt's (1999) review of property sales correspondence from 1731-71 allows a range between 15 and 25. Given that Hooke estimated land yields across Britain at £20m per annum, he valued the land of Britain as an asset worth £370m (18.5 × £20m).[12]

For an estimate of the coin in circulation, Hooke used Davenant's (1701)[13] figures from the mint accounts and other sources. He modified Davenant's 1600 figure from £4m to £6m, but agreed with the figure for 1666 (£14m) and 1688 (£18.5m). Taking the average growth of specie money for the intervals 1600-1688 and 1660-1688 Hooke extrapolated the expected coin of Britain in 1749 to be between £28.1m and

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[10] The tax was reported as 4 shilling in the pound, and with 20 shilling to a pound this makes it a 20% tax..

[11] This is the inverse of the year's purchase as $1/0.054 \approx 18.5$ and $100{,}000/1{,}850{,}000 \approx 0.054$.

[12] Giffen objects to this figure on the basis that Hooke made no distinction between the years purchase on lands which had houses and those which did not. This does not seem to have been a distinction made at the time, so appears anachronistic.

[13] Hooke (1750: 5) gives the reference as *Discourses on the public revenues* book II, p. 29.

£28.4m. He rounded this up to £30m on the basis that trade had grown faster since 1688.

The personal stock was somewhat more complicated and was Giffen's biggest problem with the estimates. Hooke appears to have applied a set of rules, derived from the physics at the time, that the ratio of money to personal stock should be constant. This is similar to Newton's universal constant, with Hooke declaring that his "scheme is perfectly *Newtonian*" (Hooke 1750: 46). Such a transfer between the physical and social sciences at the time has been well documented.[14] To make his argument Hooke again referred to "the two great masters of *Political Arithmetic*, Sir William Petty and Dr. Davenant" but found to his disappointment that their ratios of coin to personal stock "differ from each other, and both from the truth" (Hooke 1750: 9). Petty and Davenant had relied on observation, not the mathematical rules established after their death, of course.

In 1660, Petty's ratio of coin to stock had been approximately 1:12, where Davenant had a ratio of approximately 1:3 (Hooke 1750: 10). Hooke failed to remark that if Petty had been in possession of Davenant's mint figures for 1660, he might have arrived at a ratio of only 1:5 but that is an aside.[15] The trouble for Hooke was that he thought the quantity of trading stock and personal goods was much higher than what Petty and Davenant's ratios allowed. In fact, he criticised Davenant's estimates of the personal stock, from 1600, 1660 and 1688, because the ratio kept changing (Hooke 1750: 21). Hooke argued that the otherwise eminent political arithmeticians had not grasped the fundamental Newtonian point that the ratio between the stock and circulating money had to be constant.

To correct this, Hooke argued that, from the farm-hand to the shop-keeper, wholesaler, Merchant, Banker, Gentlemen and Peer, there was a personal stock worth at least twenty times the coin for every person. This, Hooke said, was based on "a certain author… [being] notorious facts, and open to every body's Observation"

[14] Henry (2008) is probably the shortest standard introduction to the topic.
[15] Hooke took Petty's ratio from *Verbum Sapienti* (1662: 5) where coin was estimated at £6m in 1660 and the national stock at £70m (shipping 3m + Livestock 36m + personal stock 31m). Davenant's figures were from *Discourses of the Revenue* (1701, vol. 3: 49, 367) as given by Hooke.

(Hooke 1750: 11). His most pertinent example was that of the trader, and the trading stock he could keep in excess of his coin holding: "If you survey a *Shopkeeper's* house, you will rarely meet with more than *ten* or *twelve* Pounds in the Till, tho', at the same Time, the Stock in his Shop alone is worth *three* or *four hundred pounds*" (Hooke 1750: 12). This suggested to Hooke that the 'correct' ratio, which set the relationship between gold coin and personal stock was 1:20. From his coin estimate of £30m he calculated the personal stock in 1749 at £600m. Comparing this to Davenant and Petty's past figures, Hooke showed that Britain had indeed added more value to its national asset account since Davenant's calculations, and could easily sustain a national debt of £80m or £100m:

Table 5.3: National assets hit one billion pounds, 1749

		Coin	Personal Stock	Land Value	Total
1600	Hooke	6,500,000	130,000,000	80,166,666	216,666,666
	Davenant	4,000,000	13,000,000	72,000,000	89,000,000
1660	Hooke	14,000,000	280,000,000	172,666,666	466,666,666
	Davenant	14,000,000	42,000,000	237,000,000*	293,000,000
	Petty	6,000,000	70,000,000	174,000,000	250,000,000
1688	Hooke	18,500,000	370,000,000	228,166,666	616,666,666
	Davenant	18,500,000	69,500,000	252,000,000	340,000,000
1749	Hooke	30,000,000	600,000,000	370,000,000	1,000,000,000

*Hooke generated this estimate by using Davenant's 1600 ratio of coin plus stock (17) to land (72)

Source: Hooke (1750: 14-17)

Hooke argued that the national assets were worth one billion pounds, so a national debt of £80m, based on the best scientific methods of the day, was not at all hazardous to the nation. Hooke the businessman argued that a debt-to-capital ratio of 1:12 (80:1000) was a very safe position, and an additional £20m of debt would only result in a ratio of 1:10, which was perfectly sustainable from a business perspective (Hooke 1750: 28). Giffen (1889: 89) refused to accept Hooke's estimate of £600m as a credible account of the personal stock, as he argued that circulating goods "must

always constitute the main items in such an evaluation" and it was simply not possible that England in 1749 had such a large circulation of goods. Given the amount of goods and gold in 1600, Hooke's suggestion that in excess of £100m worth of goods, capital and assets were circulating could be questioned. In 1610 King James I had struggled to raise £81,000 and had only balanced the royal books by agreeing to lease crown lands at £200,000 per annum (Colquhoun 1814: 156). But the 1600 figure was only arrived at through Hooke's insistence that ratios were constant. If we consider the 1749 figure one might look to Defoe (1738) or Young (1769) for some explanation of Hooke's very high 'personal stock' figures, which so outraged Giffen.

The personal stock included the 'tradable stock' of merchants. This stock, as Defoe (1738: 192) had pointed out, was based on credit and paper money. It was not real – not real in the sense that Giffen presumed it must be gold backed – but as Hooke's "certain author" had pointed out (1750: 11), the shop-keepers could maintain a large stock without having recourse to coin. Giffen who was writing at the end of the 19th century had no reason to think the 18th century had a well-developed paper credit system because the history of economics literature referred to the period as simply mercantilist. So he presumed that all money in the 18th century was gold backed, and therefore discarded Hooke's estimate. 18th century sources suggest that the circulation of credit money had reached £350m in the 1760s – and there were goods available to trade for this (1769: 419). Seeing that Hooke included the trading stock with every other asset in the country, a total £600m might not be a far-fetched notion, bearing in mind what was being counted. Giffen was only interested in 'capital' as defined in 1889, and he found Hooke's figure incomprehensibly large because the concept of capital which informed his analysis was different from the personal stock which Hooke considered.

2.3 Hooke's Economy

Hooke's economy was similar to that of Petty (1662) or Davenant (1712) in that it accumulated a national stock. The source of this stock was the value of lands, coin, assets and the circulation of goods and money. The ratio between coin and personal stock indicates that for Hooke the value of the national wealth was increased by adding more specie to the nation, but specie was by no means the only way to enrich the nation. He was adamant in both his books that "Commerce is the genuine source

of Wealth and Power" (Hooke 1750: iv) and that the economy was not the trade surplus.[16] It seems to be a mix of political arithmetic and Defoe's economy.

Hooke supposed, just as a businessman might, that any investment in capital was expected to yield a return. Therefore the whole national wealth could be treated as a trading stock on which the population earned a 10% return. So "the present annual *Income* of the Kingdom must be a *tenth* Part of the whole Capital, and amount to at least, *one hundred million*" (Hooke 1750: 26). Hooke therefore concluded that the national debt was not a big issue, as the debt to earnings ratio was 4:5 or £80m debt to £100m earnings (Hooke 1750: 28).

A 10% return on land was perhaps justifiable, as agreed by Giffen (1889), but the personal stock was by definition not all trading stock but included items such as furniture and "stock for consumption" (Hooke 1750: 5). It is not at all clear what the role of coin was, or how it gave an annual return. Hooke had presumed that coin grew steadily (reminiscent of Newton's first law of motion) but gave no indication of how it could do so. Did it have to be brought in from abroad, and if so, by what means? Seeing that coin records were from the mint, the reference must have been to gold, but the system does not appear internally consistent.

Despite this issue related to specie; there was a clear logic in how the economy grew and what the national income was. "The National Income has been shewn to be *one hundred* Millions" (Hooke 1750: 28) and was the return on the national wealth. From this income, Petty or Davenant would have deducted their estimated national expenditure to calculate the superlucration or addition to national wealth through private investment. Hooke reversed the method, estimating instead that given "ratios already established" the value of national stock should rise by £11.5m[17] annually (Hooke 1750: 26). With a national income of £100m, taking away the investment in new assets left £88,520,429 as the "whole present Expence" (Hooke 1750: 26) – or expenditure on necessities, as Davenant might have said. For Hooke, this meant the "Medium, for the *annual* Expence of each person" was £8 17*s* (1750: 26). For growth

[16] Or in Hooke (1748: vi): "Trade is the source of Wealth, and Wealth, of Power and Dominions."
[17] Increase in Coin + Personal Stock + Land Value = 344,387 + 6,887,743 + 4,247,441 = £11,479,571

to take place, people should invest the difference between national income and expenditure to add to the personal stock, and somehow generate more coin.

The purpose of this chapter and my thesis in general, is not to re-construct consistent ideas of the economy by making assumptions on behalf of past authors. Rather, I am trying to emphasise that the ideas of the economy during the mid-18th century were inconsistent and the definition of the economy has changed. Hooke was vague in how he set out the connections and even in how he applied – and combined – past analyses. But he was clear that there was an economy, and that empirics were needed to argue about policy. The issue of credit funded merchants was clearly part of Hooke's analysis, as in his examples of the trading stocks which shops could hold, but this did not fit into his wider theory of the economy, at least in the way he constructed it. So, while there is probably good reason to believe some of his empirics, there are valid questions about his theoretical consistency. What was not in doubt was that Hooke saw the economy as a collection of assets that yielded a return. By investing in those assets, the national stock grew and national income would grow over time. The national debt was a drain on this investment flow, as interest payments could not be used to invest in national stock. But if the loans had been used to invest in capacity and interest was low, it might be beneficial to build up such debt. Because Hooke's theories and accounts did not fit the mercantilist narrative promoted in the 19th century, he, like other contemporary authors and empirical accounts, has generally received little attention since then.

2.4 Arthur Young, the last of the practical economists

The same lack of attention does not apply to Arthur Young, who is celebrated in the history of empirics (Stone 1997), empirical surveys (Brunt 2001) and national accounting (Studenski 1958) as being the best supplier of consistent data on British economic matters from 1700 to 1774. Young is celebrated in part because he is usually presented as the *only* empirical thinker at the time (as in Maddison 2007). As the editor of a popular agricultural journal, member of the British Board of Agriculture, and author of 25 books and numerous articles, Arthur Young was recognised in Britain and across Europe as an influential agricultural innovator and an important political economist. Arthur Young was many things, but he was not a university trained scholar. After school he joined a merchant company and,

uninterested in the trading life (Edwards 1898 [1967]), soon began to write his own books. Perhaps because he was not an academic, his contribution to political economy was quickly forgotten or deliberately ignored (Rashid 1998).

Young published three major works on economic matters (Young 1768, 1769 and 1774) and one work on the Seven Year War (1754-63), which also addressed itself to economic points (Young 1759). His accounts of the nation were very much in the English tradition of Petty, King, Davenant, Defoe, Decker (1743) and Hooke. It was empirical, secular and inclusive of the whole labour force regardless of their type of employment. Young criticised the contemporary Physiocratic idea that manufacturing was an unproductive sector, asking "how can M. Quesnay possibly assert that the labour of this industry does not multiply the wealth of the whole nation?" (Young 1774: 256). He was similarly critical of the book, supposedly written by Matthew Decker, which espoused a particularly 'mercantilist' like position:

> The great and material point concerning every country, is *The Revenues*. We are apt too often to absorb all consideration in this alone – and too frequently imagine, that every circumstance attending a nation, is of great or trifling value, only in proportion as it advances the revenue of the state. (Young 1769: 85)

Young's economy was not the aggregate government revenues, it was not the trade balance and it was not defined by the separation of productive and unproductive labour – a French innovation he felt was a mistake. The national economy for Young was the income generated as "the result not of mines, but of industry, [which] will be the prosperity of agriculture, arts, manufactures and commerce" (Young 1774: 46). By the arts he included both artificers – manufacturers – and also lawyers, physicists and other service industries. As in his account for 1771 where the service workers were estimated to earn an income of five million pounds per annum:

Table 5.4: Arthur Young's 1771 economy includes services and goods

The Soil	£	66,000,000
Manufactures	£	27,000,000
Commerce	£	10,000,000
Publick Revenues	£	9,000,000
Sums at interest	£	5,000,000
Law, Physic,[18] &c.	£	5,000,000
Total income of England	£	122,000,000

Source: Young (1771: 547)

Young published numerous accounts of England's national income from 1759 to 1774 and always argued that specie would always be scarce, but the widespread use of paper money and credit to pay for domestic goods and services had led to Britain overtaking France in terms of economic wellbeing (Young 1774: 421). Much of his analysis was driven by comparisons between Britain and France. It is not exactly clear how Young thought the economy functioned, but he was very aware that policy makers wanted empirical evidence to back their legislation. More than anything, countries wanted a way to estimate their wealth against their rivals. Young warned against single figures to represent the national wealth, and instead wanted broader measures to compare the "general wealth" of countries (Young 1769: 413). Politicians wanted simple metrics which they could base their policy making on, but in estimating the national wealth, there were a number of factors:

> The general wealth of a kingdom, may be divided into three sorts, 1. The rental. 2. The perishable personal estates. 3. The valuable Ditto. 4. The current coin. (Young 1769: 413)

To a large extent, Young's list is reminiscent of Hooke's indicators. Young counts the rent of land, perishable and non-perishable assets and specie. Like the Newtonian Hooke, Young suggested that "there is great reason to suppose a proportion generally holds between the number of people and the rental" except in the case of Holland (Young 1769: 415). He suggested that the population of England was 6.5m, and that the rental return on land in England and Wales was £20m per annum. Keeping the same proportions for Scotland and Ireland, he found that the total rental income of the

[18] i.e. medicine

British Dominions was £22m, compared to £33m in France (Young 1769: 415). "France is therefore, not only by far the richest of the two nations, in this respect, but likewise vastly so in proportion to the number of the people" (Young 1769: 416).

He reached the same conclusion on the current coin available in each country, stating that the coin available on the British Isles "does not amount to £20,000,000" while Voltaire had estimated the French coin at £52.5m (Young 1769: 416). But why, asked Young (1769: 417), was France so "infinitely inferior to England" when it came to raising armies? The reason for Young was that in France the vast majority of domestic transactions required specie. The reliance on specie, or "cash" in Young's writing, limited the amount of goods that could be transacted in France to the £52.5m available (Young 1769: 422). Britain, on the other hand, used "money" or more explicitly "notes" which were "the signs of money" to undertake domestic transactions (Young 1769: 422). Because all British domestic affairs were transacted in such paper notes, and all foreign transactions in cash, the French advantage in specie was irrelevant. The British paper money plus specie allowed a broader consumption and circulation (Young 1769: 421).

France's superior specie holdings did not make it a richer nation because the use of paper money in Britain meant Britain could circulate several hundred million pounds of value. As Young later wrote, a wealthy age was characterised by the "superior ease in getting money" (Young 1774: 50), which was the case in money rich Britain, but not in specie rich France. Young's final national account, which I present here, was not only based on extensive travels across Britain and France, it also epitomises the lack of a consensus in the economic literature at the time. Young (1769: 441) sought to estimate the "General prosperity and Power" of each nation, but rather than give a single numerical answer – which he had warned against – the assessment is surprisingly qualitative:

Table 5.5: Arthur Young's qualitative comparison of France and Britain, 1769

France is superior on the points	England carries the superiority on
Extent	Government
Fertility	Agriculture
Situation	Commerce
Populousness	Revenue
Capital*	Army
General Wealth	Navy
Publick Credit†	Colonies
Painting	General Prosperity
Sculpture	Architecture
	Music
Writers on:	Writers on:
Natural History	History
Agriculture	Government and Politics
Painting	Moral Philosophy
Art of War	Criticism
Academies	Romance
	Poetry
	Society

* Young's own footnote indicates that this is a reference to the capital city, given to Paris for its population.
† Young's own footnote suggests that France winning this may be "perplexing" as England's credit worthiness is so much higher than the French. Because the French have no paper money, there was no associated risk on the public credit, and with an absolute monarch there are no issues about parliament not being able to act (Young 1769: 458).

Source: Young (1769: 458-9)

This account is almost anticlimactic as it provides no empirical comparison and does not set out in clear empirical terms what notion of the economy Young is arguing for. Partly this was because Young did not want to narrow the perspective of policy makers dealing with France or those assessing the current state of the nation. It is interesting to note that general prosperity, government, revenues, commerce and agriculture are all in the English column, but as young writes, "the prosperity of England rests on much better foundations; those of a most happy government, a well-managed agriculture, a most extensive commerce, a large revenue, and a formidable navy" (1769: 442). This was the basis for good economic management and growth. He was more explicit on other points, noting that the English tax revenues of £10m was more than France's £9.5m and estimating median wages (Young 1768: 270-1). He stated quite bluntly that a mixture of poor economic thinking in France, poor

economic management and the inability to convert their natural assets into paper credit, meant that the 17-18.5 million people ruled by the French King and the approximately 145m acres of land in France were wasted.

> What a spectacle! With these two materials of power [land and population], Peter the Great would have rendered himself master of Europe: Cromwell would have enslaved the Universe. (Young 1769: 5)

'Enslaving the universe' is probably hyperbole, but Young's point was well made: the English seemed to have a better way of conducting their economic affairs, and the basis for that management was the political system and good policy advice. The advice and analysis provided by the professionals like Decker, Massie, Hooke and Young, between 1740 and 1780, were all clear empirical investigations.

3. Scholars vs. industrial policy advisors

While a rich empirical literature existed, the wealthy merchants, industrialists and well-educated who were used to advising parliament were now increasingly ignored. Parliament, it seems, could only be united on national problems such as the Invasion by Bonnie Prince Charles who made it to Derby in 1745, fighting the Seven Year War (1754-63) or the anti-Catholic Gordon Riots in 1780, where:

> The riots lasted for days, during which buildings were turned into rubble and the inmates of the capital's jails were freed to join the orgy of violence; anarchy only ended when the military was called in. (Wilson 2007: 20)

But even then the government struggled for unity. The old type of advisor to politicians - merchants, industrialists and royal favourites - were being challenged by scholars and clergymen (Shelton 1981) and the established advisors were not happy about it:

> The MATHEMATICIAN and the natural PHILOSOPHER, who travels thro' the vast Expance, marks the Dimensions, Orbits, and Periodical Revolutions, of the celestial Luminaries, and penetrates the inmost Recesses of Nature, may amuse himself and his Readers, with airy Speculations, or furnish just Matter, to a devout Mind, for praise and Adoration of the GREAT CREATOR; but the MERCHANT,

> by his Art, brings down their Services into common Life, and avails himself of the Usefulness to *Trade* and *Navigation*…'tis the MERCHANT that is the true practical PHILOSOPHER (Hooke 1750: iv-v, his capitals)

Merchants were the "practical philosophers" while the scholars, who had university degrees and were ordained as Doctors of Divinity only spoke of the "great creator." They were unaware of how business worked and could not be of use in the economic debate on policy. The merchant was happy to resign himself "to the *Divine Will*" which clergymen like the Dean of Gloucester, Rev. Josiah Tucker (1750), should focus, but they should stay out of the economics and not get involved in common business or policy, according to the industrialist Hooke (1750: v). But the educational establishment was gaining ground. A good example is David Hume's rejected application to the University of Edinburgh in 1744. The position went to William Cleghorn after clergy members petitioned the university to reject Hume due to his atheism (Nobbs 1965). The story was repeated at the University of Glasgow where Hume failed to gain a chair in Philosophy, following his trial for heresy (of which he was acquitted). There may have been something to Hooke's complaint of academic naïveté. One academic suggestion for the improvement of merchant transparency was to make merchants take an oath on the bible, to which a Mr William Horsley, MP and presumably merchant, responded:

> This, Sir, has been chiefly owing to the Ignorance and Perverseness of Scholastick Statesmen, who are too learned to consult People vers'd in Trade, and too wise, or too indolent, to look into it themselves ; and so seeing Things in the first Light that presents, they take meer Chimera's for settled Truths, and thereupon concur in laying the Foundation of infinite consequent Mischiefs. (Horsley 1744: 19)

These "Scholastic Statesmen" so unaware of the real world, should not be relied on. Leave them in the universities and churches where their scholarly overtures could do no harm. They had no experience of the real world and did not understand its business. That at least was the opinion of the professionals who had served as advisors for so long. But graduates had begun establishing themselves in government since 1700, and would listen to their old professors and 'higher' authorities rather than the merchants. Since Davenant's push for government employees who were educated and

unaffiliated with their local areas of responsibility, the civil service had grown (Torrance 1978, Buck 1982). These men of the government and academies were, as Thomas Paine put it in 1771, disadvantaged by their government jobs as "every year's experience gained in the Excise is a year's experience lost in trade; and by the time they become wise officers, they become foolish workmen" (Paine, cited by Buck 1982: 31). About the Treasury secretaries who oversaw the revenues, Dora Mae Clark (1936: 24) remarks that "public school or university education, while not requisite for appointment, was not uncommon."

The excise office grew and became known for its efficient work-methods, so it is not unreasonable to presume that other sections of government followed its model. By the mid-1730s, in foreign affairs "British Policy was now made not by visionaries or innovators, but by technicians" (Simms 2008: 229). These "technicians," "wise officers," "scolastick statesmen" or "philosophers" were the product of the slowly improving university system where education meant a priestly training in the 18th century. While no systematic research on civil servants' educational background in the 18th century appears available, it seems reasonable to presume that when universities educated the staff for the growing civil service, it would in turn absorb the university language of the scholars.

3.1 What sort of an economy could emerge from this?

Schabas (2005) and Hoppit (2006) argue that the notion of an economy emerged around 1760, a point implicitly made by Gordon (1991) and others. Schabas connects this with the de-naturalisation of economics, as the social science slowly became secular. I agree that this may be the case during the 19th century, but it does not describe the 18th. While Schabas carefully treats the definition of nature, secularism and science in her book, the definition of the economy is dealt with somewhat briefly on the first page, where she implicitly assumes that the economy as a concept must be invariant over time:

> Daily references are made to *the economy*, whether in speech or print. Most economists (and many politicians) maintain that virtually everything we do is governed by the economy. We are deemed to be producers or consumers at every

> moment of our lives. Every interaction can be defined as an act of exchange with an implicit price. Every object or service is potentially evaluated in terms of other goods and, thus, part of our so-called utility calculus… If one goes back a few centuries, however, it is by no means clear that people, even the learned communities of Western Europe, perceived such an entity as *the economy*. (Schabas 2005: 1)

Schabas is right of course. Even among the "learned" communities of Britain there was no such economy in the 18th century. Why? Partly because it was not among the learned academic community that economic theory was being debated. But mainly it is missing because the economy Schabas is looking for is a 21st century, utilitarian, general equilibrium, GDP economy, where the flow of goods and services define its size. Matthew Decker the mercantilist (1740) would have ridiculed the idea that everyone is a consumer and producer always. You produced when you exported, you consumed when you imported, and anything else was simple re-production of the same national wealth. Massie (1757) would have wondered why there was an "implicit price" in adding capital stock to the nation's wealth when this enriched the economy. Hooke would have protested the notion that everything has a relative price: What mattered were the relative ratios between coin and personal stock, and how their combined growth could be accomplished. I suspect the Defoe-like Decker (1743) would have looked askance, wondering what 'utility' meant and, once it was explained, why it mattered. Jeremy Bentham, the father of utilitarianism, celebrated his first birthday the year Decker died.

Schabas cannot identify an economy before 1760 because the economies that were measured in the pre-1760 national accounts were so different from what she is looking for. After 1760, or, more correctly, after 1776, Schabas and Hoppit see the first outlines of a familiar economy in the work of Adam Smith, who talks of an economy divided between a productive and unproductive sector. Following Schabas, there is then a prolonged period where the concept of the economy slowly came closer to a 'de-naturalised' – or less tied to natural processes and the natural philosophy of the 18th century – and more GDP-like economy, which is much easier to recognise from a 21st century point of view. I agree with Schabas and Hoppit that Smith's definition of the economy came to dominate the discourse in the 19th century, and I discuss this in

chapter seven. Unlike them, I argue that this definition of the economy was not slowly adopted, but was adopted almost instantly, with the help of Smith's friends and readers who were actively engaged in politics, and who, with Smith's encouragement, sought to implement his ideas into policy. Equally I disagree with the argument that the concept of the economy emerged in the late 18th century. What emerged in 1776 was not *the* economy but yet another definition of the economy which found a way to convince policy makers that it was 'right' for its time.

Between Walpole's fall in 1742 and Smith's work in 1776, political fragmentation ensured that no single person could change Parliament's definition of the economy. This gave scholars and clergymen the space they needed to argue for their definition of the economy at the expense of the professionals who had measured and defined the economy for over a century.

4. The end of an 18th century of empirical advice

The most striking characteristic of the period from 1740 to the 1770s in British economic thought is similar to my observation for the whole 18th century. Before Adam Smith's *Wealth of Nations* (1776), economics was primarily an empirically driven discipline with a deep theoretical debate on the definition of the economy. It is only by the 1740s that the theoretical depth begins to weaken. Policy advisors needed to adapt their analysis to a rapidly changing, and increasingly fragmenting, political situation, and this had some impacts on the quality of their reasoning, which was not always complete. Despite this, the work of Decker, Massie, Hooke and Young was debated throughout the period and in Young's case across the continent, because it was part of the English, and now British, economic tradition.

This tradition of economics, based on empirics, and written by civil servants, merchants and industrialists, was challenged by the rise of the professional scholars who in Britain were the graduates who received clerical training in their universities. Neither the scholars nor professionals were able to dominate the discourse but instead continued to provide analysis to their individual patrons. They each criticised the other, the industrialists choosing to ridicule or denigrate the analysis of academics as "airy speculation" (Hooke 1750: iv) or referring to the "Ignorance and Perverseness of

Scholastick Statesmen" (Horsley 1744: 19). The scholars retorted by not citing economic analysis by those who did not have academic training.

This debate would continue until either of the two found a champion who had the necessary political clout to influence the administration. On this front, the scholars were slowly gaining the upper hand, as government policy was increasingly directed by the analysis of civil servants who were better and better educated. University education became increasingly necessary as a long term position in the bureaucracy required specialist skills. The economic writers who did not have a university degree – which conveyed a Doctorate of Divinity – were no longer authorities on social issues, as the university graduates in the civil service looked to their teachers. Because scholars and the professionals had little regard for one another, the scholars and academics made little use of past English work and preferred to look elsewhere. They looked to France, where a new scholarly tradition was starting and it too was being attacked by merchants and government officials. To understand how the definition of the British economy changed with Adam Smith after 1776, we need to understand what was happening in France, which the next chapter aims to show. As it turns out, the French experience in the late 18th century is analogous to what happened in Britain, as new and old advisors fought for prominence in policy making. But, as I argue in the next chapter, in France the scholars popularly known as the Physiocrats lost.

Chapter 6

A French Alternative to Physiocracy, 1750-1789

> "To be sure a schism is something very terrible; the meaning of the word is a division of opinion, and till this fatal moment all men had been agreed to think the same thing
>
> -Voltaire (1768: 87-88)

The conflict between scholars and traditional policy advisors was not unique to Britain and, as part of their argument; British scholars looked to fellow academics for ideas and support. The academic contribution in France, by the Physiocrats, is a mainstay of the history of economics, and it is presented as the dominant theory of the economy from 1750 to 1790 in France (e.g. Blaug 1978, Heckscher 1994, Medema and Samuels 2003). This chapter argues that Physiocracy was not in fact the only, nor even the dominant, theoretical position on what defined the economy. It was not a matter of different authors who "arrived at the same time, though by a different route, at many of the same practical results" as suggested by the Physiocrat Pierre Samuel Du Pont de Nemours (1768 [2003: 569]). Rather, there were a number of different routes which led to very different results. The Physiocrats defined the economy in one way while the government administration, responsible for economic policy, defined it in a distinctly different way. As Voltaire put it, a "schism" existed on how to conceptualise, measure and improve the economy, with the government even shutting down the Physiocrat journal.[1]

I argue that this schism has been missed because historians of economics have tended to focus on past academics, or the scholars of Paris, and because of a successful Physiocratic revision of the published writing of the non-scholarly rivals. The actors, scholars, merchants and civil-servants, are the same as in Britain, and the French scholars would influence the British. This chapter provides an overview of how the Physiocrats defined the economy. This overview will be relatively brief, as a substantial literature already exists by economists, politicians and historians. I present

[1] Schabas (2005: 45) notes that "The Physiocratic Journal, the *Éphémérides du Citoyen*… was discontinued in 1772 owing to government intervention"

Physiocracy to highlight its unique and important definition of the economy, and as a counter-point to what I argue is the administrative definition of the economy. Indeed, once the Physiocratic economy is defined, I will show how the Council of Commerce (*Counseil Royal de Commerce*), which was responsible for economic policy, defined agriculture and manufacturing as productive activities and how they constructed accounts to measure the economy.

1. The Physiocratic Economy

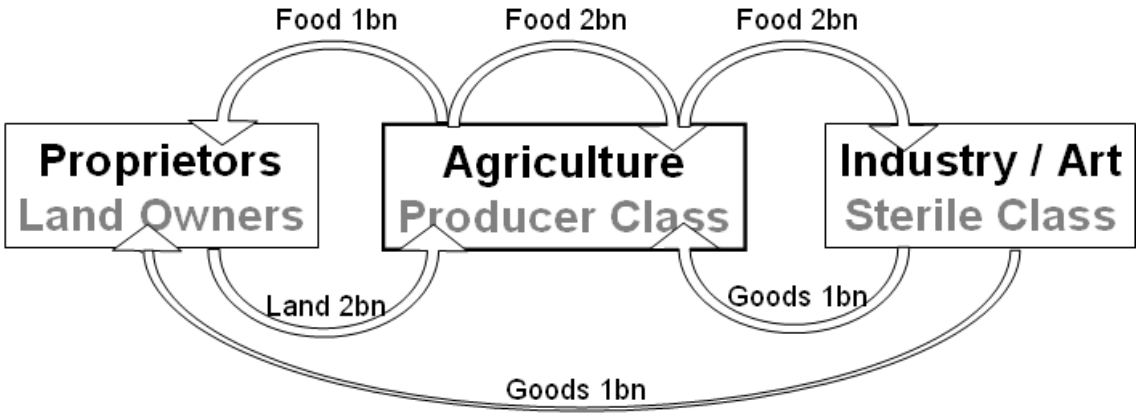
From 1750 onwards the physiocrats are presented as the mainstream economic view in the history if economics (e.g. Blaug 1976). It was a school of thought built around two men: François Quesnay and the Marquis Victor Mirabeau. Their contributions to political economy and policy making have been studied extensively (see Meek 2008), in particular their definition of the economy in Quesnay's *Tableau Economique* (1760) (Charles 2003, Brewer 2005).

Quesnay's definition of the economy revolved around the idea there were three sectors which circulated all incomes and revenues: land, manufacturing and agriculture. Only agriculture was able to generate a net surplus year on year, so the two other sectors were defined as sterile, as they simply circulated the rent and revenue from agriculture or processed it into manufactures. By 1759, and the second edition of the *Tableau*, Quesnay's notion of the net produce was a combination of the disposable agricultural surplus, profits of the farmer and the farmer's return on investment. By the third edition, only a few months later, the net surplus was just the disposable agricultural surplus year on year (Charles & Théré 2008). Thus the only way for the economy to grow was through the expansion of agricultural output, as the two other sectors (land and manufacturing) were limited by the agricultural output circulating in the economy (Charles and Théré 2008).

Quesnay's most famous expression of the Physiocratic economy was diagrammatic representation of his *Tableau Économique* (Quesnay 1758 [1958: 801], Studenski 1958: 64, Meek 1963: 159, Blaug 1976: 26, Brewer 2000, Steiner 2003: 68, Brewer 2005: 1, Murphy 2009: 119). The *Tableau* is generally considered the first economy conceptualised as a circular flow (Studenski 1958: 63) and the *Analyse* is "one of the

simplest and best known versions of the *Tableau*" (Brewer 2005; 1).[2] Starting with agriculture in the middle of *Figure* 6.1, the productive sector generates 5bn *livres*[3] worth of food. Of this 5bn, 2bn is consumed or saved by the agricultural sector itself, while 2bn is sold to industry. Industry consumes the two billion in its production process and generates goods to pay for the food, selling 1bn worth to the proprietors and 1bn to agriculture. Because industry is therefore unable to generate a net surplus, it is deemed sterile. The land owners buy 1bn worth of food and 1bn worth of industry goods, which they pay for by renting land to agriculture for 2bn. Depending on how much money and food agriculture saves and re-invests, it will produce more or less year on year. So the total agricultural output can grow (or shrink) depending on the ability of the farmers and their investment.[4] All the income in the economy depends on agriculture's ability to generate the inputs for industry and final goods.

Figure 6.1: Quesnay's 1758 economy re-drawn, quantity flows in billion *livres*



Source: Based on Quesnay's *Analyse*[5] (1758 [1958: 805])

[2] Others have suggested Cantillon had a similar flow concept (Schumpeter 1954: 222, Foley 1973: 139-40, Brewer 1992: 163-4) as pointed out by Brewer (2005). Alternative French theoretical antecedents for a circular flow of income would be Law's (1705) concept of circulation (Murphy 1986) or the work of Boisguilbert (1697, 1703, 1707, 1707b), as argued by Benitez-Rochel and Robles Teigero (2003).
[3] The *livre* (*l*) was the French currency used in the 18th century, divisible into 20 *sous* (*s*) which were each divisible into 12 *deniers*. A *Crown* (half *ecu*) was the equivalent of 3 *livres*. After the revolution in 1795 the *Franc* was introduced at 1*l* 3*s*
[4] Quesnay's original formulation also includes savings held by the two sterile sectors at the start of the year, paid in advance to the agricultural sector for food. As my aim is to highlight the definition of the economy, this only adds complexity to my exposition. For more detail see Steiner (2003: 68).
[5] The traditional representation of the *Analyse* was published in the later 1760s but the first version of the *Tableau* appears to have been printed in 1758 (on gold leaf no less, and on Louis XV's approval). This is according to Kuczynski and Meek (1972) who have documented the early editions of the *Tableau* which has a manuscript version dated 1758, although no version of the original edition still exists (Murphy 2009: 120).

According to the Physiocrats, agriculture determined the total output available in the French economy. If, through investment or good weather, agriculture could produce additional output from added investment, then the whole economy could grow as more 'food' allowed more rents to be paid, more goods to be demanded and more surplus to be kept for next year. Despite this theoretical model the Physiocrats had little empirical work to substantiate their argument. They had to wait 25 years for a first attempt at empirical estimation:

1.1 Physiocrats and empirics

It was only in 1785 that a physiocrat, Du Pont, prepared a memorandum for a Government Committee on Agriculture which included empirics. He estimated that the gross agricultural production was worth 4bn *livres* per year, of which 1.5bn was circulated to the sterile sectors (Studenski 1958: 67). Four years later, in 1789, he argued against a 25% land tax in the National Assembly, citing the same basic figures (Du Pont 1789: 9-12). The Physiocrats had to wait until the eve of the French revolution for full empirical accounts, by the chemist Lavoisier, who turned to political economy and adopted Physiocracy in the 1780s (Studenski 1958: 71). Lavoisier published an account of the economy in 1791[6] entitled "On the Territorial Riches of the Kingdom of France."

Lavoisier complained in his introduction that it had taken him 17 years to collect enough data by himself for a national account of France, and even now he was not fully satisfied and would have preferred longer to finish the account. But given the revolutionary emergency, and the National Assembly's request for the account, he was forced to publish.

Lavoisier set out three empirical accounts necessary to estimate the Physiocratic national income. One: The "produit territorial" or the gross agricultural output of the entire kingdom of France (Lavoisier 1791: 7). Two: The portion of this territorial product which was converted into money terms for sale, allowing computation. Three:

[6] Studenski (1958: 77) noted that Le Trosne had estimated French Gross Agricultural Output for 1776, but it seems this was only published by d'Ivernois in 1799. Similarly Studenski lists Voltaire (1768) as providing a gross agricultural output, which I will address below as non-Physiocratic.

"The 'revenue net,' or what remains of the territorial income in cash, after all expenses and charges were levied. This portion is one that is shared between the Public treasury and the proprietors" (Lavoisier 1791: 7).[7] This third account was part of the net surplus from agriculture, divided between the proprietors and the public funds, as manufacturing added nothing to the economy in the Physiocratic analysis (Blaug 1976, Steiner 2003, Brewer 2005).

Lavoisier made a detailed estimate of the population of France, at 25 million, divided both into age structure (1791: 25) and social status (1791: 26). This was based on the 1736 census of the French districts performed by Michaudiere (Lavoisier 1791: 10-11) and correspondence with local intendants – regional economic administrators – and *fermiers généraux* (farmers-general) – private individuals contracted over 6 years to collect land taxes in French districts.

Lavoisier used his population estimate to extrapolate a national income, or gross and net agricultural income, for France. He gathered three distinct sets of data which would allow him to cross-check his own account. First, "Produit Territorial" was the total agricultural product, collected in quantity measures and converted into monetary values, based on Parisian price estimates for the urban population and an assumed set of costs for the rural population. Second was an estimate of expenses and consumption of the population in per capita terms, based on expected consumption. Third, he estimated the daily earnings and expenses of the population using wage figures, urban price surveys and estimates of rural prices. For each stratum of society an average annual national income was calculated from the poorest, *les plus miserables*, at 60 *livres* per annum to the average rural person (117-120*l* p.a.), soldiers (251*l* p.a.) and the officers and gentry (Studenski 1958: 73). He finally arrived at an average income per person, assuming a five-person household with two working adults, of approximately 117 *livres* 3 *sous* per annum. This is equivalent to approximately three quarters of the wage of a single British soldier, the lowest paid labour in Britain, sixty years earlier (Defoe 1738: 181).[8] Multiplying the average

[7] My translation.
[8] Approximately 5 pounds 2 shilling in British terms, using the 1768 exchange rate. This is based on Voltaire's 1768 translator who noted that "A million *livres* is about 42,750*l* sterling" (Voltaire 1768: 2), which gives a ratio of approximately 1 : 22.85. Gournay (1754: 386) suggests a similar exchange

family income by the population Lavoisier concluded that the "real income of the nation, free of any duplication" was between 2.5 and 3 billion *livres* (Lavoisier 1791a: 35, 1791b: 426). Given the level of detail and the request of the National Assembly for such a national account it seems clear that empirics were also an important form of evidence in 18th century France.

1.2 The opponents of Physiocracy who had empirical evidence

The Physiocrats had a unified theory of the economy, originally constructed by Quesnay, who proposed his theory in opposition to what he called the "merchants' system" (Quesnay 1758 [1958: 555]).[9] This merchants' system was not a reference to the later notion of British mercantilism – which I have argued is at best a time-period reference, not a school of thought, and would have been anachronistic in 1758. Rather, Quesnay linked the merchants' system to the economic policy makers in France, suggesting that it was the dominant view of the economy and a negative influence on policy making (Steiner 2003: 64). I will argue that these believers in the merchants' system were not imaginary straw-men. They were the policy makers who held a consistent theory of the economy and measured it empirically. As a result of their definition of the economy their policies were often at odds with Physiocratic principle. This was the policy view held by the Councils of Commerce and Finance, who withheld empirical information from the Physiocrats and promoted their own, very different economy.

Where Lavoisier had struggled for 17 years to gather data, the Councils had access to a range of data on prices, yields, incomes, taxes and customs records, and the level of empirical detail available supported their theoretical innovation and decision making. Data was collected from the Bureau of Trade, which had composed the balance of trade since 1713, and from the farmers-general, who were required to report their takings to the council. The regional intendants collected data on the church tithe and the public expenditures which they oversaw, while drawing on local magistrates' records, various surveys and censuses undertaken in France during the 18th century.

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rate of 1 : 24). Based on Defoe's (1738: 181) wage estimates, army soldiers in Britain earned in excess of £7 per annum, while marines earned in excess of £13 per annum, and ordinary labourers would earn in excess of £23 per annum given a 52 week work year.

[9] Translated and quoted by Steiner (2003: 64)

As an example of the ample empirical detail available to the Councils and the French government administration, consider Charles and Daudin's (2009) description of the Bureau of Balance of Trade accounts. In the early 18th century 230 farmers-general collaborated with the Bureau, submitting reports every term on output, cross-provincial and cross-border trade. The amount of data would grow throughout the century, and when the second Bureau opened in 1782, it was overwhelmed by 20,000 reports and 1,529 registers, detailing 8,000 types of goods, their destinations, prices and quantities, which required the bureau to hire and train an additional 300 employees (Charles and Daudin 2009). This availability of empirical evidence to 18th century French policy makers was only helped by the nationwide farmers-general, who collected taxes and had to submit accounts of all their takings. These accounts went to the central government and the Councils of Commerce and Finance who used the data to inform their policy making. The next section shows how the empirics shaped the economy, as outlined by one of the leading intendants of commerce.

2. The Merchants' System

Vincent de Gournay[10] was an intendant of commerce from 1751 to 1758, whose writing I argue defined the economy in France. Even his Physiocratic opponents, like Du Pont (1768 [2003: 569]), regarded him as a man guided "only by the soundness of his Genius" as "all he lived for, and aspired to, was the public welfare", according to his protégé Turgot, on whom Gournay had a "formative influence" (Murphy 2009: 136) and who would eventually become finance minister (Turgot 1759 [2003: 464]).[11] As an intendant, Gournay was responsible for a large number of economic policies, and he wrote out his theory of the economy after being encouraged by Daniel Charles Trudaine, "the head of the administration of Commerce… [who] urged him [Gournay] to give as it were an outline of his doctrine… since at that stage he had developed his ideas only as occasion arose during business discussion or in conversation" (Turgot

[10] Jacques Claude Marie Vincent de Gournay was no relation to Michel Jean Amelot de Gournay as far as I gather. Michel de Gournay oversaw the Trade Balance (1716-24), and was President of the Board of Trade and supervisor of the Intendants of Commerce during that time (Charles and Daudin 2009).
[11] Turgot later wrote of Gournay, "His zeal was gentle because it was purged of self-esteem; but it was not therefore any less earnest, for love of the public welfare gripped him" (Turgot 1759: 465).

1759 [2003: 465]).[12] This led Gournay to translate the work of British economic thinkers Josiah Child and Thomas Culpeper with his own comments and considerations.[13] The manuscripts were published but for unknown reasons the comments were not. Unable to publish his comments, Gournay wrote a series of 'manuscript memoirs' re-published by Tsuda (1993) where he "formulated principles which appeared to be new to some of the magistrates of whom the Ministry of Commerce was composed" (Turgot 1759 [2003: 454]). It was here he set out the merchants' system, which he convinced the council to adopt. This was the system and economy his followers and opponents associated with him, and Gournay's economy, unlike the Physiocratic, had more than one productive sector:

> In all countries around the world, there are only two categories of people who contribute to increase wealth – first, the farmers [*laboureurs*] because they till the land and get the produce from it; and secondly, the workers, craftsmen, seamen and merchants, thanks to their industriousness and trade. As all other occupations obtain nothing from the land and derive no new wealth from foreign countries, it is fair to say that those who practice these occupations live at the expense of the fruit of the labour of the farmers, craftsmen, seamen and merchants.
> (Gournay 1753 [2003: 372])

According to Gournay, two sectors added to national wealth, agriculture and industry, not just agriculture as in the Physiocratic economy which Quesnay would argue about five years later. Gournay was adamant that France needed to "pass good laws on manufacturing" (1753 [2003: 383]) as manufacturing and agriculture were the "only two sources of wealth for any State" (1753 [2003: 376]). My use of the word industry is in the sense that Gournay and Turgot employed the term themselves, as those labourers who did not work the land and could be disaggregated into:

> Entrepreneurs, Manufacturers, and Masters who are all possessors of large capitals which they turn to account by setting to work… the second order, which consists of ordinary Artisans who possess no property but their own hands, who advance

[12] Turgot (1759: [2003 465]) remarked that Gournay had "the good fortune to find in M. Trudaine… the same love of truth and of the public welfare that motivated himself".
[13] Published by Butel-Dumont in 1754 as *Traité sur le commerce et les avantages qui résultent de la reduction de l'intérêt d'argent, par Josiah Child bart., avec un petit traité contre l'usure par Sir Thomas Culpeper*.

> nothing but their daily labour, and who receive no profit but their wages. (Turgot 1766: 61 [2003: 539])

These manufacturers who use capital to create output "emerges all over the kingdom under the name of industry" (Gournay 1753 [2003: 391]). While "the profits of industry, unlike the revenues of the land, are not a gift of nature", the manufacturer can still earn a profit and accumulate capital (Turgot 1766: 50 [2003: 532]).

Gournay (1753 [2003: 391]) also discussed what he termed "commerce and trade", which was not a reference to only international trade, because when he remarked on "four laws passed to extend navigation and trade" in Britain (1753 [2003: 383]) he used 'trade' to include both inland and international trade.[14] Turgot likewise defined the merchants as those who undertook commerce (1766 [2003: 544]), and the reference point for both authors appears to be Defoe's *Complete English Tradesman* (1738), discussed in chapter 4. This is emphasised when Gournay cites Defoe's estimate of two million people "trading both wholesale and retail in England alone" (Gournay 1753 [2003: 381]) as a reference to what a trader was. So Defoe's "inland trade" (1738: 182) is being applied by Gournay, which means that he considers the circulation of goods domestically as well as the international trade. Turgot appears to follow the same definition in his work:

> One merchant confines himself to laying in a stock of one or several kinds of commodities which he sells in his shop… One makes his exchange in his own neighbourhood and by himself… [Another] from one Kingdom to another Kingdom, from Europe to Asia. (Turgot 1766: 67 [2003: 544])

Like Turgot, Gournay was not just an advocate of free international trade, which is commonly used to associate him with Physiocratic ideas; he was an advocate of free enterprise, as industry, agriculture, domestic trade and international trade all added to his economy. He therefore argued that these productive industries should be de-regulated to encourage the expansion of the economy. For Gournay "everything that

[14] Two of these laws referred to international trade, the importation of wool and the Levant exports, while two related only to the domestic trade, in the form of the herring fisheries and domestic manufacture of silk (Gournay 1753 [2003: 383]).

restricts labour, and which puts people off it impoverishes the State, as it takes away from work people who would be willing to devote themselves to it" (1753 [2003: 384]). These multiple productive sectors were noted with interest by both Tsuda (1993) and Clark (2003), but neither author explored the meaning of this to investigate how Gournay defined the economy.

In identifying two productive sectors, Gournay also defined a group of people who were "supported by others, and who necessarily live at the expense of the farmers, and of the merchants, workers and craftsmen" (1753 [2003: 373]): The unproductive sector or the "useless mouths" (Gournay 1753 [2003: 380]).

These unproductive professions were estimated by Gournay at 2.75 million (1753 [2003: 372]), made up of monks, priests or nuns (300,000); soldiers (200,000); law-makers and enforcers (40,000); clerks for taxes, fees etc. (58,000); land tax (*taille*) collectors and general government administrators (2,000), people of independent means (*rentiers*) (200,000); footmen (150,000); and the unemployed who were reduced to begging (1,800,000). Gournay proceeded to use his data to estimate "how much it costs the nation to have 2,750,000 people clothed, fed and maintained" (1753 [2003: 374]):

Table 6.1: Gournay's unproductive sector cost France 1bn *livres*, 1757

300,000 Clergy @ 500*l* per annum	150,000,000*l*
200,000 Soldiers and officers wages and pensions, @ 182*l* p.a.	36,500,000*l*
40,000 Dispensers of Justice @ min 500*l* p.a. in 'forced gratuity'	20,000,000*l*
58,000 Clerks collecting taxes & fees @ 600*l* p.a.	34,800,000*l*
1,920 Other Government Admin @ 10,000*l* in salaries & profit	19,200,000*l*
40 General Tax collectors @ 50,000*l* p.a.	2,000,000*l*
40 Farmer Generals @ 120,000*l* p.a. in fees and advances	4,800,000*l*
200,000 *Rentiers* @ 3,000*l* p.a. depending on King & Individuals	600,000,000*l*
150,000 Footmen @ 300*l* p.a. in provinces and Paris	45,000,000*l*
1,800,000 Unemployed, require 3*s* to survive, from alms or stealing	98,550,000*l*
	1,010,850,000*l*

Source: Gournay (1753 [2003: 374-5])

It cost the French economy one billion *livre*s to maintain its unproductive sector, meaning the cost to the productive sectors averaged "66*l* 5*s* per [productive] person,

in compulsory and voluntary contributions of all sorts, and regardless of what they [the productive people] have to spend for their food and their own support" (Gournay 1753 [2003: 375]). Of the 15.25m people available to work, Gournay complained that the number of unproductive people in France was much higher than those of Germany and Britain, and their cost of 66*l* 5*s* per productive person was higher than the German and British unproductive costs.

> We just want to underline that, because occupations like farmer, seaman, worker and merchant are the most useful to society and the only sources of strength and wealth for any State, one must encourage these as best one can, and limit the number of the others [unproductive people] to prevent them from extending beyond what is necessary. (Gournay 1753 [2003: 377])

> Thus, if these [productive] occupations are exercised by fewer people in France than in England, it necessarily follows that capital in France increases far less in proportion, and far more slowly than in England. (Gournay 1753 [2003: 376])

The more productive people the country could support, in the form of farmers, merchants, workers or seamen the more capital and goods would be generated, as less was wasted supporting unproductive people. By capital, Gournay and his protégé Turgot were referring to any form of accumulated and durable value – what we might call a durable asset today, emphasised by Turgot:

> Anyone who, whether in the form of revenue from his land, or of wages for his labour or his industry, receives each year more value than he needs to spend can put this surplus into reserve and accumulate it: these accumulated values are what is called *capital*. (Turgot 1766: 58 [2003: 536])

Gournay and Turgot saw the economy as the circulating goods and "capital" (or accumulated values) generated by the productive sectors, with the total representing the wealth of the nation.[15] The idea of circulation was emphasised when Gournay complained that "in France the trade and circulation of grain is so often hindered… So

[15] This should not be mistaken for Turgot's later – and more famous – contribution to economic theory where he linked savings to capital formation and discussed the transmission mechanism; Murhpy (2009: 145-51) provides a brief review of this work.

here is a source of employment missing in our country, and thus more idlers" (Gournay 1753 [2003: 391]). The productive sectors - in this example, agriculture – supplied the employment and income which led to capital formation. The unproductive sector drained some of the goods and capital from the economy, restricting capital formation and resulting in a lower level of national wealth. So the productive-to-unproductive ratio was an indication of the potential economic wealth that France could achieve.

This is the merchants' system that Quesnay and the Parisian Physiocrats tried to resist towards the end of the 1750s. In his eulogy of Gournay, Turgot wrote of "the bitter opposition, dictated by quite different principles, in Paris" to Gournay's merchants' system (Turgot 1759 [2003: 468]). Gournay was 'a man of systems' and the language of the Physiocrats opposed the government's theoretical 'System':

> The opposition which his principles encountered has led some people to portray M. de Gournay as a fanatic and a *man of systems*. This phrase, *a man of systems*, has become a type of weapon in use by all those who are biased or interested in maintaining some abuse, and directed against all those who propose changes in the *status quo*.
>
> The philosophers of recent time have indeed, with as much strength as reason, striven against the spirit of *systems*. (Turgot 1759 [2003: 472]).

Gournay was a man of systems, the merchants' system. He was an intendant of commerce and therefore a policy maker at the highest level in France. The intendants in the Councils of Finance and Commerce were the target of Quesnay's opposition to the "merchants' system" because they had a unified theory of what defined the economy.

An alternative reading of Turgot's eulogy could be as a criticism of the Parisian intendants who had not yet adopted his new System. To make that argument one would have to point out that no very influential Parisian physiocrats by 1759. Quesnay was in Versailles, only Mirabeau was a 'convert', and their possible real influence only started in the 1760s. I would agree that the eulogy could equally have

been aimed at entrenched policy officials but Gournay had already convinced the head of the Council of Commerce – Trudaine – of his System, and he had built up a circle of intendants around him who supported him, but opposed the ideas coming out of Versailles and Paris about agriculture as the fountain of economic growth (Murphy 2009). The connection I am making is between the idea of Gournay as 'a man of systems' and the language of the Physiocrats as opposed to the government's theoretical 'System'. My point throughout this chapter is that the Physiocrats had very little real policy impact, but that is not the same as saying they were not publishing pamphlets and treatises which were read. Louis XV had approved Quesnay's *Tableau* himself, Mirabeau had already published *Ami des hommes ou Traité de la population* (1756) and Quesnay wrote two articles for the *Encyclopedie* in 1757 on 'Fermiers' (farmers) and 'Grains' (Cereals) emphasising the agricultural sectors output as productive.

The circle around Gournay had been publishing papers in the *Journal Economique* since the mid-1750s, and this journal had published some of the Physiocratic articles after 1758 but "became alarmed by the vast program of the young school and ceased to be so cooperative" and forced the physiocrats out of the journal and over into the *Ephemerides and Journal de l'Agriculture* (Wasserman and Tate 1951: 439). Meanwhile, other economic journals were blossoming in Paris (There 1998) and the *Journal de Œconomique* (1751-52) and *Journal du Commerce* (1759-63) which dealt with agronomy and theories of commerce respectively, are mentioned by Steiner (2003: 62) as influential. So I think it is fair to say that there was a debate going on already in the late 1750s, and I argue that the Physiocrats – who wanted to influence policy – were aiming their criticisms at the theories coming from the government *economistes*, and Turgot's eulogy was a reflection of this. Gournay and the intendant's system have not had much exposure in the literature and are worth exploring to understand how the French conceptualised and measured their economy, and how the French debates would shape the later British definition of the economy.

2.1 Economic Growth defined by Gournay

The productive-unproductive ratio and capital accumulation were important for understanding how fast the economy could grow. Accumulated capital could be invested at a return in land, agriculture, "industrial or manufacturing enterprises...

Commercial enterprises" or lent out at interest, leading to profits (Turgot 1766: 83 [2003: 558]). The growth of capital was dependent on the cost of the unproductive sector.

> If, then, the proportion of people hired, fed, clothed and maintained at the expense of the active and working part of the nation – which is composed of the farmers, workers and merchants – is greater in France than in England or Germany, it must be that we have fewer farmers and so on, and since they are more heavily burdened here than in neighbouring countries, it must be that farming is less widespread, and that every day many of our farmers abandon the land to become beggars. Therefore, one should not be surprised if the number of our crops is decreasing, whereas the number of our beggars is increasing. (Gournay 1753 [2003: 376])

The high cost of maintaining the unproductive sector meant that the productive sectors, the "farmers, workers and merchants" were constrained, and could not spend and invest as much as their foreign counterparts. So the failure of the French economy to increase employment in the productive sectors meant that manufacturing, trade and agriculture would generate and circulate *less* capital and goods. As productive people became more "heavily burdened" they would not be able to afford the maintenance of their work, and would emigrate or be forced to become beggars. This in turn would increase the relative size of the unproductive sector, leading to even higher dependency ratios and further exacerbate the contraction of production in a negative cycle.

> Since the Kingdom is not witnessing an increase in the number of people, in agriculture, shipping and trade, the value of all goods in those occupations cannot increase; it can only decrease just like the number of our people, our shipping and our trade. (Gournay 1753 [2003: 379])[16]

[16] Gournay (1753 [2003: 391]) similarly concluded that "If while the English grow and acquire daily more men, more lands under cultivation, more fish, more shipping, more commerce and trade, we do not get more men, more lands, more fish, more shipping, more commerce and trade, we thus become notably poorer and weaker compared to the English."

> Since more activity, more trade and more money attract people, then England must surely attract our people, whereas we do not attract hers (Gournay 1753 [2003: 376])

More economic activity, economic growth, attracted more immigrants, which, assuming they joined the productive sectors, would add to economic growth. This in turn would be represented by a growth in the value of the circulating goods and capital. Two countries with the same dependency ratio would grow at the same rates, only differentiated by their total populations, which is why population was important. Gournay's economy could grow as fast as the productive-to-unproductive ratio allowed; making that ratio not only the limit to the level of national wealth but also indicative of the rate at which the economy could grow.

> A country where the number of workers and people labouring in production is infinitely higher than that of consumers is a country which will trade actively and become wealthier. (Gournay 1753 [2003: 384])

As the number of productive people grew in relation to the total population, trade grew, within the nation and without. The productive-to-unproductive ratio was what allowed the circulation of goods to grow, and as the number of unproductive to productive people fell, the economy could grow faster.

> A wider and more rapid circulation in England must enable it to increase its capital more than is the case in France. (Gournay 1753 [2003: 377])

This in turn led to a more rapid accumulation of capital, which fed back in to the economic growth through investment in productive industry. But all of this emanated from the productive labour, which was found in manufacturing, trade and agriculture.

> Labour is thus a capital stock which money only represents. Hence it is labour and not money which is the wealth of the State. (Gournay 1753 [2003: 384])

It was productive labour which was at the core of the economy, and it was the sole generator of new output for the nation and the treasury. This was why Gournay presented such detailed accounts of the unproductive sectors, because they indicated

how well the French economy was doing and how it would perform in relation to France's rivals.

2.2 Measuring the Economy

Gournay did not attempt to estimate the total wealth of the nation explicitly; focussing instead on measuring what he thought was the most important factor in ensuring economic growth. He suggested four "visible signs" to indicate the overall economy's performance (Gournay 1753 [2003: 378]).

1. Interest rates: According to Gournay the rise in French interest rates during the 1740s (Clark 2003: 379) was the result of a fall in trade and available funds as "we are less rich than we were before the war" (Gournay 1753 [2003: 379]). As we saw above, Gournay and Turgot subscribed to the idea that moveable wealth, or capital, circulated in the economy and that the size of that circulation – the availability of loanable funds in modern terms – set the interest rates. Turgot, in his *Réflexions* (1766), repeated Gournay's idea that "The current interest on money placed on loan can thus be regarded as a kind of thermometer of the abundance or scarcity of capitals in a Nation, and of the extent of the enterprise of all kinds in which it may engage" (1766: 89 [2003: 561]). The interest rate indicated the circulation of capital, given the current population and the size of the unproductive sector, with higher rates of interest in times of scarcity of capital.

2. The number of sailors and ships indicated the extent of the international trade capacity of the country and of production available for exportation. If the merchant marine was declining, as Gournay noted it had, "our trade must be as well" (1753 [2003: 379]). Comparing the new British silk manufacturing industry with the well-established French industry, Gournay showed that British exports were supported by a large inland trade that supplied the "stockings and other works made purely of silk" to Britain itself (Gournay 1753 [2003: 389]). So the international trade capacity was tied up with domestic market production and the productive employment of labour. Therefore the merchant marine was a useful indicator of economic well-being.

3. Rents reflected the demand for housing and business property and would reflect the circulation of wealth, while valuing many of the assets in the economy.

Problematically the rents in the provinces were stagnant and were "even decreasing in a few of our sea ports" (Gournay 1753: [2003: 387]).

4. The value of land as sold in the provinces indicated the demand for farm-land, and thus the supply of agricultural goods. Again Gournay found that in France the prices in the provinces were low and the offering of land plentiful, meaning little economic activity.

2.3 The administration and its followers changed France

So in Gournay's estimation the French economy was in a bad state. Pundt (1941: 872) argues that there was a shift in economic policy making in France which "stimulated French economic life, notably after 1750." I suggest that this policy change towards industrial encouragement, through de-regulation (Pundt 1941), happened because the Council of Commerce defined the economy in terms of agriculture and industry. It happened because they adopted Gournay's definition of the economy, not because of the Physiocratic notion of an agricultural economy, which would only be developed a decade later.

Gournay was able to exert policy influence because he was part of the main policy making body in France, the Council of Commerce (Schaeper 1983), recognised as "the center of administrative thought concerning the French economy" at the time (Meitzen 1891: 154). Many of the writings from this centre of thought were lost in the revolution, but Michel Antoine (1970, 1973), *conservateur* at the French *Archives Nationale*, reconstructed one of the few files left to show how the administrative branch became the dominant policy maker during Louis XV's reign from 1715 to 1774 (Church 1971: 787). The council signed the royal *edicts* which constituted the legislative process. In 1736, where paperwork survives from the Council of Finance, the intendants created 2,638 new legislative interventions. Of these interventions only 6% were shared with the King and full Council, meaning the intendants were legislating with effective autonomy (Antoine 1973). French economic policy was decided by a handful of intendants, with Gournay's ideas at the core. He even attracted a circle of followers, including Morellet and Turgot whom he trained in the Administration (Clark 2003: 371).

According to Du Pont (1761 [2003: 569]), Gournay presented his work and theories "to the supreme Administration, and, by his conversations and advice, [began] to train young and worthy Magistrates who are today the honour and the hope of the Nation." Turgot agreed that it was to Gournay that France "owe[d] the propitious fermentation of thought on these important questions [of political economy] that has taken place these last few years, and which sprang up two or three years after M. de Gournay had been Intendant of Commerce." (Turgot 1759 [2003: 466]).

Clark (2003: 466, footnote 20) suggests that Gournay's followers include Forbonnais (1754, 1756), Goudar (1756), Blervache (1758) supposedly co-written with Gournay, and possibly the series of articles published in the *Journal Economique*. This journal had published some of the Physiocratic articles after 1758 but "became alarmed by the vast program of the young school and ceased to be so cooperative," forcing the physiocrats out of the journal and over into the *Ephemerides* and *Journal de l'Agriculture* (Wasserman and Tate 1951: 439).

All these 'followers' of Gournay were "less doctrinaire than the Physiocrats and certainly did not subscribe to the view that only agriculture was capable of producing a new product" (Murphy 2009: 137). They maintained this opposition to the Physiocratic definition of the economy, even after Gournay's death in 1759, and they were all associated with the government administration. Forbonnais became the inspector general of the French Mint and his 1767 *Principes Economiques* argued that national income should depend on both agriculture and industry, where agriculture was the more important as it provided for the subsistence of the economy (Studenski 1958: 65-6). Turgot had worked with Gournay for several years, and while he subscribed to some Physiocratic notions after Gournay's death, his definition of the economy was in line with Gournay throughout his writings. He used a combination of the agricultural output and the total goods and capital to define

> the total Wealth of the Nation [which] is composed of (1) the net revenues of all the landed property multiplied by the rate at which land is sold; and (2) the sum of all movable wealth which exists in the nation. (Turgot 1766: 91 [2003: 562])

Net revenues of landed property are the profit from agriculture and land. To get the value of the land itself, one had to multiple the annual returns by the *rate* at which land was sold, meaning the "number of years' purchase" (Turgot 1766: 91 [2003: 562]). In bad times, you would expect a lower demand for output and less willingness to buy, so a piece of land yielding 100,000*l* p.a. might be sold for 1.5m *l*, or at 15 years' purchase, whereas in good times one could expect a rate of up to 25-30 years' purchase. According to Turgot, the *rate* multiplied by the annual revenue provided the part of the national wealth derived from landed property – this then is the value of land. The second part of national wealth was "moveable wealth", by which Turgot refers to "objects of a more durable nature whose value would not be lost in time" (Turgot 1766: 49 [2003: 532]).

> Possessions of this kind, resulting from the accumulation of unconsumed annual produce, are known by the name of *moveable wealth*. Furniture, houses, commodities in store, the tools of each trade, and live-stock constitute wealth of this kind. (Turgot 1766: 50 [2003: 532-3])

Moveable wealth included all goods in circulation and all capital circulating. Nef (1938: 94-5) argues that there was a "remarkable" growth in industry, trade and the moveable wealth in France from 1750 onwards and attributed this to the decay of the guilds. Pundt (1941) elaborated and associated this decay of the guilds with the growth of the merchant and consuming classes, on the back of an expanding domestic supply of goods and services. Neither Pundt nor Nef attempts to explain *why* this happened, although they emphasise the "liberal economic policies of such enlightened administrators as the Trudaines, Tolosan, Gournay, Dupont, and Turgot" (Pundt 1941: 872). I suggest that these "liberal" policies were a result of Gournay's definition of the economy, and the Council's adoption of it, as a guiding principle of policy.

3. Voltaire and the economy

The theory for the merchants system was built by Gournay on a combination of empirics, policy making and as part of the wider 18th century debate on the place of luxury in the economy, which involved everyone from Mandeville to Rousseau and Voltaire (Berg and Eger 2002, Jennings 2007). This section argues that the merchants' system was the mainstream perspective, while the Physiocrats were resisted by policy

makers and, amongst others, Voltaire, who expressed "his opposition to the Physiocratic notion that agricultural pursuits were the sole sources of wealth and prosperity" (Vignery 1960: 260). More than that Voltaire made an empirical case against a Physiocratic policy suggestion and kept arguing for a particular concept of the economy throughout his writing.

Voltaire's economic idea is first given expression in the debate over luxuries. This debate was a European debate of whether "general luxury is the infallible mark of a powerful and flourishing empire" or the cause of an Empire's fall (Voltaire 1738b [2003: 281]). The Physiocrats argued that luxuries were detrimental to the economy, as they were a product of the sterile industries (Mirabeau and Quesnay 1763: 72); luxuries therefore reduced the agricultural surplus. But since the 1730s a movement now called "neo-colbertism" (Goldie and Wokler 2006: 404) had argued that luxury, were beneficial to the nation as "luxury is, in some sort, the destroyer of Sloth and Idleness" (Melon 1734 [2003: 256]), or as Voltaire eloquently put it:

> That pomp and splendour deemed so vain,
> Are proofs still of a prosperous reign.
> The rich can spend this ample store;
> The poor is grasping still at more...
>
> ...Thus Wealth, in France and Britain's states,
> Through various channels circulates.
> Excess prevails, the great are vain,
> Their follies oft the poor maintain;
> And Industry, whom opulence hires,
> To riches by slow steps aspires.
>
> (Voltaire 1738a [2003: 273])

For Voltaire, manufactured luxury had the ability to improve the nation, and the production of luxuries by the rich and vain employed the poor and would slowly allow the poor to rise out of poverty. When the Physiocrats proposed a 50% flat rate income tax on all farmers in the 1760s (the *impôt unique*), Voltaire wrote a scathing empirical critique, to which later commentators attribute the failure of the *impôt*

unique proposal entirely (Studenski 1958, Vignery 1960). His critique was based on the merchants' system.

3.1 Voltaire's empirical use of the merchants' system

In *The Man of Forty Crowns* (1768) Voltaire satirised and criticised the Physiocratic concept of the economy. Problematically, Voltaire's data were traced to Mirabeau and Quesnay's *Philosophie Rurale* (1763) by Physiocrats writing after Voltaire's death (Lavoisier 1791: 18), effectively co-opting Voltaire into the Physiocratic school (Studenski 1958: 67). But the majority of data in the *Philosophie Rurale* are on British trade and Britain's inability to raise national income in terms of a Physiocratic agricultural economy. It was never explicitly stated what data Voltaire is supposed to have used, and no clear data candidates stands out in the *Philosophie Rurale*. Tellingly, the data presented by Voltaire was cited in contemporary Franco-British comparisons (Young 1769: 416), whereas the data presented in *Philosophie Rurale* were not used in the international literature, not even by the Physiocrat Lavoisier when he composed his national account in 1791. This association between Voltaire and Physiocratic empirics was therefore, I suggest, a revision by later Physiocrats. This sub-section shows how Voltaire set out the accounts of the nation and that his work was an empirically based argument against the Physiocrats.

Voltaire's argument against the *impôt unique* was written as the story of a farmer objecting to the Physiocratic tax proposal. This farmer met with a "Geometrician" to ask about the tax, and the geometrician presented him with detailed data on the state of France and set out a national account to explain the problem of this tax proposal. The Geometrician was a man to whom "the ministry owes its knowledge of the due rate of annuities for lives" and who had invented devices for giving the cities running water (Voltaire 1768: 9). While the story is supposedly fiction, the first set of population data given by the Geometrician was from a surprisingly real source. The population estimate of 20 million "two-handed bipeds" (Voltaire 1768: 9) was sourced traced explicitly to reports of the intendants at the end of 17th century and the 1754 chimney survey of Mezence under the supervision of the regional intendant of Rouen, Michaudiere, "A very intelligent Person" according to Voltaire's own footnotes (1768: 10).

The Geometrician then provided data on the total acreage of France - 130 million French acres,[17] of which only half was suitable for farming and only 25 million provided good returns annually. But "let us state them at fourscore millions [i.e. 80m]. One cannot do too much for one's Country" added the Geometrician (Voltaire 1768: 10). He provided an estimate of the circulation of specie at approximately 900 million *livres* and noted that "this money passing from hand to hand, is sufficient to pay for all the produce of the land, and of industry" (Voltaire 1768: 12). Note Voltaire's use of "land and industry", as in Turgot's contemporary definition of the national income and, as I will show below, Voltaire would make the same separation between productive and unproductive as his "friend" (Murphy 2009:138) Turgot did. The Geometrician then estimated the average yield from farms at 30 *livres* per acre, or 25*l* if one was being uncharitable. He also provided an estimate of the average life-span of Parisians at 23 years and estimated that there were 90,000 people in the country's convents, going by the "lists of the super-intendents, taken towards the end of the last century" (Voltaire 1768: 57). By this stage the reader has been given a very rich and detailed background for a supposedly fictitious character.

I suggest that the Geometrician alluded to was not fictitious but was Antoine Deparcieux of the Royal Academy of Science in Paris. Deparcieux was a French mathematician and engineer who provided the royal councils with demographic calculations on mortality rates, which the councils used to calculate life annuities and their public issue (Weir 1989, Velde and Weir 1992). Similar to the Geometrician, Deparcieux's estimate of average longevity, excluding miscarriages, was incidentally 23 years and 6 months (Rohrbasser and Théré 2004). Deparcieux was the inventor of several devices that 'lifted water' to accommodate taps and running water, installed in both Crécy and Arnouville Castles. He was a member of the Academy of Sciences as an Engineer, where he was elected as *adjoint-géomètre,* later becoming *associé-géomètre*. When the Geometrician leaves, the farmer even "thanked the academician of the academy of sciences" for all his help, and this is where Deparcieux was *associé-géomètre* (Voltaire 1768: 29). Deparcieux was a geometrician by training, and

[17] The translator provided a footnote on page 10: that a French acre is different from the English acre as it "contains 100 perches square, of 18 feet each ; ours about half as much more"

I argue he was Voltaire's geometrician, who with Voltaire had access to a range of data available only in the Councils of Commerce and Finance.

Data such as this were not available in the public sphere, and the majority of it was collected by the intendants, submitted to the Council of Commerce and maintained there for policy making. Voltaire's detailed description of the Geometrician might not have been planned, but with Deparcieux's death in 1768, Voltaire could have added the biographical detail without worry about reprisals coming from Deparcieux.

Using these empirics, the Geometrician calculated the annual revenue yield from agriculture "which I have a little amplified" to 30 *livres* per acre on 80 million acres, giving a total yield of 2,400 million *livres* (Voltaire 1768: 12). Given a population of 20 million, the average revenue per person was 120 *livres*, which equalled 40 *Crowns*. So the title *The Man of Forty Crowns* was, I suggest, a reference to the average Frenchman. The farmer, or "man of forty crowns", as he was called, was also rather surprised in the book to find that he owned exactly 4 acres of land, which earned him on average 120 *livres* per year (Voltaire 1768: 13). Voltaire presented the 40 crowns as an average, arguing that the distribution of income was skewed, as many people in France earned 10 crowns p.a. while there were "above six million of men who have absolutely nothing" (Voltaire 1768: 15). Voltaire stated that this was the revenue available from agriculture, but he never stated that the national income was fully accounted for by this amount. In fact, his total economy depended on two sectors – a definition apparently adopted from Gournay's merchants' system.

3.2 Voltaire's economy

Voltaire presented empirical evidence, not hypothetical situations. He did so to make a case about the impact of the taxes on the economy, and the economy was not fully accounted for by considering only the 2,400 million *livres* which agriculture generated. This was clear when the *Man of Forty Crowns* asked the Geometrician what would happen if the population doubled?

> It would be this: that one with another each would have, instead of forty, but twenty crowns to live upon ; or that the land should produce the double of what it now does ; or that there should be double the number of poor ; or that there should

> be the double of the national industry, or of gain from foreign countries ; or that half of the people should be sent to America ; or that one half of the nation should eat the other. (Voltaire 1768: 18)

The per capita national income of 40 crowns in this example depended on the agricultural output, but industry and international trade could substitute for agriculture, as they were also productive industries, regardless of the Physiocratic argument to the contrary. Double the population and you would need to double "agricultural output" or "the national industry" or even increase the gain from foreign countries. Industry does not refer to the effort made in cultivating the land, but rather to what Gournay and Turgot had defined as industry and what Voltaire called the "refined industry" (Voltaire 1768: 22). These were the manufacturers and highly skilled craftsmen who produced goods, and this business was, according to Voltaire, more stable and profitable than agriculture (Voltaire 1768: 22). Agriculture had a role to play as the major sector of the economy – with more than 50% of employment in 1791 (Lavoisier 1791: 26) – but as Voltaire wrote in 1755, "Agriculture is the source of everything… Although it does not do everything" (Voltaire, cited in Moland 1877-9: 359).

As a farmer, you could increase personal productivity in a few ways only: Marry a woman who is "industrious and a good economist" meaning she would save money and generate income (Voltaire 1768: 62); expand your acreage; or increase your productivity. To which the Man asked whether expanding farm production would improve the nation?

> *Man of Forty Crowns*: How much will the nation have gained at the end of the year?
>
> *The Geometrician*: Nothing at all ; unless it has carried on a profitable foreign trade ; but life will be more commodious in it. Every one will, respectively, in proportion, have had more cloaths, more linen, more moveables than he had before. There will have been in the nation a more abundant circulation.… But there will not be half-a-crown more in the kingdom. (Voltaire 1768: 23-4)

The nation did not benefit in terms of specie or currency from expanding agriculture, as the Physiocrats suggested, but rather the circulation of goods and capital would be improved: there will be "more moveables." Note that Voltaire, in the voice of the Geometrician, is using the same term as Gournay and Turgot when referring to how life would be more "commodious" by increasing the amount of "moveables", or goods, and capital. The value of goods being circulated would rise, and as Turgot (1766: 39 [2003: 526]) had written, "all commodities are in certain respects *money*" as commodities which last are exchangeable for other commodities. That may not be a confortable definition for a 21st century reader, even if it is not far from the relative price world of neoclassical microeconomics. So life would be more "commodious" according to Voltaire, and it could happen even if "there will not be half-a-crown more in the kingdom." More specie was not required, because if the economy could produce a surplus of agricultural and industrial goods – including luxuries – the nation would grow, and people would grow richer, as "[t]he rich enable the poor to live" (Voltaire 1768: 17).

> The more industrious a nation itself is, the more it gains from foreign ones. Could we, on our foreign trade, get ten millions a year by the balance in our favour, there would in twenty years, be two hundred millions the more in the nation: This would afford ten livres a head more, on the supposition of an equitable distribution; that is to say, that the dealers would make each poor person earn ten livres the more, once paid, in the hopes of making still more considerable gains (Voltaire 1768: 17-8).

As with Gournay, international trade and inland trade generated income for the nation. Preferably the government should avoid taxing production to encourage a surplus. In any case the government should not earn any money at the end of the year, as this would have "been squeezed from the circulation" of goods and capital (Voltaire 1768: 24). The government could potentially drain money and goods from the circulation, meaning that budget surpluses were unproductive. Encouraging this circulation of goods and capital could be achieved by maximizing productive sector activity (agriculture and industry) or, conversely, minimizing unproductive activity. Like Gournay, Voltaire identified a number of unproductive sectors. He highlighted the clergy – as had Gournay (1753 [2003: 374-5]) – but in 1768 Voltaire's criticism was

aimed explicitly at the Physiocrat who had suggested the *impôt unique*, Mirabeau. Voltaire directed his comments at the author of "*Friend of Mankind*, or rather the friend of Monks" (Voltaire 1768: 63), suggesting that the unproductive monasteries might instead:

> become hospitals, or be turned into places for manufactures. [Thereby] Population would be increased, all the arts would be better cultivated. One might at least diminish the number of novices. Such is the opinion of all the magistrates, such the unanimous wish of the public, since its understanding is enlightened. (Voltaire 1768: 54)

Those "enlightened" magistrates – the regional intendants and the Council of Commerce – would have agreed with Voltaire's attack on the unproductive sectors. They sympathised with the idea that expanding trade and manufacturing would lead to a growing circulation of goods and capital with a rising population. Equally familiar was the concept of unproductive professions which hampered commerce and agriculture. Voltaire identified them as the farmers-general, monks, priests and comptrollers who were responsible for collecting land or church taxes (Voltaire 1768: 31), the soldiers who had to be paid from the state coffers (Voltaire 1768: 16) and especially missionaries and clergy (Voltaire 1768: 57-9). Voltaire also discussed those "who have nothing" in terms of land and distinguished them from those set to work by the rich – productive labourers. Those who had nothing and did not work were unproductive members of the economy (Voltaire 1768: 16). To complete Gournay's list of unproductive activities, Voltaire introduced his book with a discussion of the *rentiers* whose "estate lies in government contracts and the funds" and their footmen (Voltaire 1768: 6). Voltaire's unproductive sector was identical to Gournay's, and by extension that leaves the same definition of productive for both.

Not content with criticising the Physiocratic tax proposal, Voltaire attacked Physiocracy with satire: He complained that the farmer's "ill fortune would have it that [he] should read the Oeconomical Journal, sold in Paris, at Boudot's", which was a waste of time as its editor "had formed to himself his principles of agriculture, at the opera and the play-house" (Voltaire 1768: 39). This was a satire on the main

Physiocratic journal published in Paris by Nicholas Baudea (Steiner 2003: 63), which advised on agricultural issues (Voltaire 1768: 38).

Eventually the narrator himself, i.e. Voltaire, entered the dialogue in the first person: Voltaire gave the farmer a set of books on economic theory and policy, to which the farmer responded: " 'Are such master pieces as these produced in a province? I had been told, that Paris was all the world, or the only place in it?'. 'It is, said I [Voltaire], the only place for producing comic operas; but there are, at this time, in the provinces, magistrates who think with the same virtue, and express themselves with the same force' "(Voltaire 1768: 75). Those magistrates agreed with Voltaire's view of the economy and his criticism of the Physiocratic tax. That is why they rejected the *impôt unique*, and Voltaire's eloquent criticism can only have helped.

4. France and Britain – two different economies, but similar protagonists

There are several parallels between the French experience and the contemporary British debate about the economy. Both sides of the channel had an active empirical debate driven by government administrators during the mid- to late-18th century. Both countries experienced the rise of an academic challenge to traditional policy advisors, and in both cases, this is missed by the traditional history of economics. The French tradition was missed due to the limited availability of a written record and the focus on academic contributions over administrative thinking. This was helped by Physiocrats like Du Pont who "did not simply edit Turgot; he made substantial alterations to the text, adding his own ideas to those of the author, which annoyed Turgot" (Perlman and McCann 1998: 185, footnote 71). The British story was missed, as I have argued, due to an over-reliance on academic contributors during the mercantilist age and on Adam Smith's presentation of history.

Like the British economy from 1688 onwards, the French economy from 1750 underwent "a remarkable capitalistic transformation. Perhaps the most dynamic factor in this transformation was the *Bureau de Commerce*" or Council of Commerce (Pundt 1941: 853). The Council's role in transforming the French economy was through its policy making role. Its motivation for promoting industrialisation was the two-sector productive economy. Unlike Britain, where politics had fragmented in the late 18th century, the French administration held on to its political power until the Revolution.

Unlike the Physiocratic theory of a one-sector economy and similar to British economics prior to 1776, the Council theory of the economy was backed up by empirical accounts and used for policy making. But these were not widely disseminated accounts, as government employees focussed on making policy, not on publishing journals or discussing theory in the Salons of Paris.

It was only on the eve of the French revolution that the intendants broke rank and began publishing their empirical accounts. These accounts exhibited the same theory of the economy promoted by Gournay, highlighted by Voltaire and opposed by the Physiocrats as the merchants' system. Therefore I argue that they further substantiate the hypothesis that the Council definition of the economy was consistently held in France, throughout the second half of the 18th century.

Consider for example the anonymously published *Mémoire sur le commerce de la France* (1789), which estimated the total national product of France. This was later identified as being written by Tolosan, another Council of Commerce intendant (Barbier 1823: 361). Tolosan's national product consisted of the income from industry and agriculture, incorporating the operating costs, wages and profits, adding up to a national income of 3 billion *livres*. Little is known of Tolosan, whose national account was never translated into English and was never referred to by the Physiocrats. To some extent Tolosan's estimate was, according to Studenski (1958), a reproduction, or perhaps an elaboration, of Minister Étienne Claviére's statement that the national income of France was 3bn *livres* in Claviére's 1788 book *Public Faith*, referred to by d'Ivernois (1799: 256). It took the beginnings of a revolution for the intendants to publish their work, and even then they published anonymously.

I am not suggesting that the Council held this theory of the economy prior to Gournay's entry into the administration, even if Voltaire did. I hope to have illustrated that the Council held a consistent definition of the economy from 1750 onwards. This constituted a major part of economic thinking in France and was probably the most influential theory in terms of policy making at the time. My notion that the Council theory was more policy relevant and the mainstream way to think of the economy in

France is actually echoed by Britain's great contemporary admirer of Physiocracy, Adam Smith, who said about Physiocracy:

> That system which represents the produce of the land as the sole source of the revenue and wealth of every country, has, as far as I know, never been adopted by any nation, and it at present exists only in the speculations of a few men of great learning and ingenuity in France. It would not, surely, be worth while to examine at great length the errors of a system which never has done, and probably never will do any harm in any part of the world. (Smith 1776: IV, ix: 2)

According to Adam Smith, at its supposed height of dominance, Physiocracy anno 1776 was a theory which existed only in the "speculations" of a few Frenchmen. Something else was dominating the economic discourse and policy making in France – I argue that was the merchants' system laid down by Vincent Gournay. Adam Smith's work, which I discuss in the next chapter, came to dominate our view of what had gone before him. In the case of Physiocracy, Smith's adoption of Physiocratic ideas such as an 'unproductive' activity (Groenewegen 1969, Skinner 1995) and his admiration for this school of thought helped Physiocracy seem like the most important theory of the economy in France during the 18th century. This is a history I hope to have contradicted. Physiocracy was an important theoretical contribution from the perspective of this thesis, because it convinced Smith to divide the economy into a productive and unproductive sector, but it did not dominate French policy in the 18th century. The academic Physiocrats lost to the government administrators in France, but in Britain scholars were winning, and they adopted Physiocratic ideas which would dominate British policy making and economics for the century to come.

Chapter 7

Adam Smith's economy in the long 19th century, 1770 - 1930

> Occupations have been classed by political economists in two categories: the Productive, such as agriculture or manufactures, – and the Non-Productive, such as the army or domestic service.
>
> -Robert Dudley Baxter, M.A. 1868: 67

It has long been accepted that the British classical economists, historiographically dated from Adam Smith's *Wealth of Nations* (1776) to the marginal revolution of the 1870s, were a diverse group of authors who did not agree on a particular theoretical point. In this chapter I argue that they shared at least one common trait: their definition of the economy. The old order of social authority in Britain had been changing since the 1740s, and by 1770 the country was ready for academic policy advisors. The *Wealth of Nations* introduced a new idea of the economy, and through the effort of Adam Smith's students and admirers, it was adopted almost instantly. Those English economists who based their work on the empirical economics from before 1776 criticised Smith's new economy for its adoption of the French unproductive sector. But these dissenters were convinced, or ignored, by the academic and parliamentary followers of Smith's economy. I am not making a claim for what Adam Smith himself intended, simply what his contemporary *readers*, the classical economists, interpreted when they continued to measure Smith's economy through the 19th century.

In this chapter I am tying together a very long time-span and a group of economists who range from Adam Smith to Karl Marx and their post-1880 critics. My method is to focus on the national accounts published throughout the period, as they give an empirical expression for how the economy was defined through 19th century eyes. First this chapter poses the argument that contemporary readers of Smith adopted a particular definition of the economy, which they applied to policy making, with Smith's approval. I then engage with the relatively rich literature on the history of national accounting which has taken the 19th century economists as well-meaning but incapable handlers of empirical evidence. I suggest that the 19th century national

accountants composed their measures of the economy in a way that was deliberate, not confused. They were measuring a different economy than the one later historians are looking for. I criticise Studenski's (1958) defining work on national accounting, as well as Deane (1955, 1956) and Vanoli (2005), on the basis that they implicitly or explicitly argue that the accounting tools of the 19th century were insufficient to measure some invariant economy, defined with 20th century hindsight. I mean invariant in the sense that Tribe 1978: 22) argues about the meaning of 'land' and 'labour' as changing definitions in the a18th century discourse, which "are not themselves constructed in the discourse: they do not precede it… [so] these apparently eternal 'economic categories' are not invariant." We have tended to use the term 'economy' as if the underlying meaning was constant for all time, when in fact the underlying meaning has changed. My suggestion is to read Studenski's excellent history and re-think the literature, so that the tool - accounting - is seen as relatively stable, but the definition of the economy is changing.

In doing so, it becomes clear that what ties the classical economists together is their agreement to define the economy as a division between a productive and an unproductive sector. Classical economists should be read with this in mind, and the criticisms by the marginalist economists should be seen as a response to this concept of the economy, which was the cornerstone of economic policy making and thinking throughout the 19th century. This economy was first expressed by Adam Smith but was formalised by the new policy makers who set out empirical accounts of the nation.

1. Smith's economy and its immediate academic influence

The *Wealth of Nations* (1776) was received with great enthusiasm on publication, not just by Smith's two first congratulators, the supposedly atheist David Hume and Scottish Church leader Hugh Blair,[1] but by the public and the academic community in particular. The first national account following the *Wealth of Nations* was reviewed with much less enthusiasm. Giffen (1889: 92-4) was extremely dismissive of what

[1] Both men wrote Smith immediately after the book's publication, congratulating him on its excellence (Hume 1776, 1 Apr [1987: *150*], Blair 1776, 3 Apr [1987: *151*]); see bibliographic notes for the method of referencing, which is to letter numbers in the *Correspondence of Adam Smith* edited by Mossner and Ross (1987).

Studenski later called "Mr. Pulteney's Amateurish Estimate" of 1779 (Studenski 1958: 43). It warranted only a single paragraph in Studenski's seminal history of national accounting (Vanoli 2005 or Bos 2009), where Pulteney was quickly dismissed as a fraud with inconsistent figures. Part of the reason for Giffen and Studenski's dismissal may be that William Pulteney, 1st earl of Bath, Privy Council member and first minister in the 1740s, had been dead 15 years when this 1779 estimate was published. Studenski appears almost indignant that he, for completeness, has to include the work of "a certain Mr. Pulteney" whose estimate was clearly "not a scientific one" (Studenski 1958: 43). Granted, Pulteney's final calculations appear basic when compared to the work undertaken in the decades before 1779, but he used a consistent theoretical model of the economy and did so, I argue, with the explicit blessing of Adam Smith.

What Studenski did not notice was that William Pulteney was the adopted name of William Johnstone, the husband of the earlier Pulteney's heiress, Frances. Sir William Pulteney, nee Johnstone, was not an "amateur." He was a Scottish lawyer who served in Parliament for 37 years (1768-1805). He enlarged the old Pulteney fortune to become one of Britain's wealthiest men and one of Adam Smith's few correspondents.[2] Adam Smith and Pulteney appear to have been close, and Smith respected Pulteney's opinions as both a lawyer and a thinker (Smith 1762, 9 Mar [1987: *65*]). In a letter dated 3 September 1772, Smith promised Pulteney parts of an early draft of the *Wealth of Nations*, noting that "In the book which I am now preparing for the Press I have treated fully and distinctly of every part of the subject which you have recommended to me; and I intended to have sent you some extracts from it" (Smith 1772, 3 Sep [1987: *164*]). On at least one occasion Smith invited Pulteney to stay with him for a few weeks and "the sooner you come and the longer you stay the better" (Smith undated [1987: *297*]). Pulteney's work, even if empirically unsophisticated, should not be discarded out of hand, because it was the first empirical account of Adam Smith's economy, as Pulteney made clear:

[2] According to Mossner and Ross's (1987) index of Adam Smith's correspondents, there are less than 100 people who exchanged 400 letters with Smith over a period of 50 years. Pulteney received a number of letters from Smith in the 1770s.

> It has been very clearly demonstrated, by Dr. Smith, the ingenious author of *The Inquiry into the Nature and Causes of the Wealth of Nations*, that a public Debt, is, to every State, a calamity of the most ruinous kind ; and that the waste of public treasure by great fleets and armies... must prove pernicious and destructive... That, in both cases, the national stock is equally diminished, and the money, which should give exertion to useful and productive industry, is diverted to the wasteful maintenance of unproductive mouths. (Pulteney 1779: 21-22)

For Pulteney, Adam Smith had clearly demonstrated that the funding of a public debt and high expenditure on wars would drain the national stock or the "total wealth of Great Britain" (Pulteney 1779: 28). Money spent on interest or warfare meant the "useful and productive industry" which could add to the national wealth was deprived of resources which instead went to unproductive sectors. Those productive industries were the "agriculture, industry and manufactures of the Kingdom" (Pulteney 1779: 22).

Pulteney's aim was to raise funds for the on-going war with the American colonies – despite its unproductive nature – by imposing an income or capital tax. To estimate the possible revenues from such a tax, Pulteney (1779: 25) argued that "it is proper to form some calculation of the national wealth." This national wealth comprised the output from what Pulteney saw as Smith's productive industries:

> In this I comprehend, the value of the land, the value of the houses, the value of stock of all kinds, and materials of manufacture, shipping, cash, money in the Funds due to the Kingdom, but deducting the like debts due by us, to other countries; in short, I comprehend every thing which can be denominated wealth or property. (Pulteney 1779: 28)

The national wealth was the national stock of tangible assets, less the national debt. According to Pulteney, the national income derived from the national wealth, just like returns derived from capital, and the wealth could only be augmented by expanding the national stock of assets. Pulteney reasoned that there was a fixed stock of national wealth "from whence this revenue must arise, reckoning it to produce 5 *per cent*., would amount, at twenty years purchase, to *one thousand and fifty millions*" (Pulteney 1779: 30). This meant that per capita expenditure was £7 10*s* – criticised by Studenski

(1958: 42) for being out-dated – and with a population estimate of seven million, national revenue from productive industries was £52.5m.

Productive labour was defined as the labour which added to the national capital stock – national wealth – from which the national revenue derived. Pulteney disregarded those professions that Smith said derived income from the national wealth but added nothing to it – they were seen as unproductive. So Pulteney's basic account of the economy, derived from his reading of Smith, seems more like a 1750s view of the economy, or even a 1690s view, except that not all labour was able to add to the stock of national wealth. In the preceding English literature from Petty (1662) to Hooke (1750) and even Young (1774), what mattered was the difference between the national income and expenditure, regardless of how labour was employed because all employment could be profitable and could add to the economy. For Pulteney it mattered *what* you were producing, as new income could only be derived from certain industries. This idea of unproductive labour was new to Britain and is often suggested as evidence of Physiocratic thinking influencing Smith (Groenewegen 1969, Skinner 1995). Pulteney's account may not have been sophisticated, but it was published three years after the *Wealth of Nations*, by a member of Smith's close circle of correspondents, so it should be characterised as expressing empirically the economy as defined by Smith. One might criticise Pulteney for misunderstanding Smith despite their close personal connection, but as this chapter will show, all national accounts which followed Smith would divide the economy just as Pulteney had done.

1.1 Smith's idea becomes political

Smith's definition would not have survived without strong political support for his work, and in 1798 a second account of the national income was fielded in the House of Commons by "another 'pupil' of Smith, the Younger Pitt" (Stevens 1987: 380). William Pitt the Younger was the Prime Minister of Britain (1783-1801) and then the United Kingdom (1804-06). Born in Scotland, schooled in Cambridge, and often guided by the future Bishop of Winchester, Pitt appears regularly in Smith's correspondence from 1783, with Pitt's 1792 finance speech commonly referred to as a "requiem for Adam Smith" (Mori 1997: 238), as, among other things, he publicly expressed that Adam Smith's

> extensive knowledge of detail and depth of philosophical research will, I believe, furnish the best solution of every question connected with the history of commerce and with the system of political economy.
> (Pitt 1792, 17 Feb; quoted in Galbraith 1991: 61)

"Not since, in the nonsocialist world at least" notes Galbraith (1991: 61) "has a politician committed himself so courageously to an economist." Pitt's 1798 budget speech to the House of Commons was a continuation of this as he proposed a new system for financing the war against Bonaparte. Like Smith, Pitt did not want to increase the national debt, as that "entails the burden upon the age and upon posterity" (Pitt 1798, 3 Dec [1940: 241]). The government would instead focus on renewing the income tax, even if had been disappointing in the previous year. The government would ensure that the tax was applied properly and to the productive people who generated new income and earned in excess of £50 per annum. It was to account for these productive people that Pitt produced the figures re-produced in *Table* 7.1.

Table 7.1: William Pitt the younger's Taxable income account, 1798

	Taxable £	National £
1. The land rental, after deducting one fifth	20,000,000	25,000,000
2. The tenants rental of land, deducting two thirds of the rack rent	6,000,000	18,000,000
3. The amount of tithes, deducting one fifth	4,000,000	5,000,000
4. The produce of mines, canal navigation, &c. deducting one fifth	3,000,000	3,750,000
5. The rental of houses, deducting one fifth	5,000,000	6,250,000
6. The profits of professions	2,000,000	2,000,000
7. The rental of Scotland, taking it at one-eight of that of England	5,000,000	5,000,000
8. The income of persons resident in Great Britain, drawn from possessions beyond the seas	5,000,000	5,000,000
9. The amount of annuities from the public funds, after deducting one fifth for exemptions and modifications	12,000,000	15,000,000
10. The profits on the capital employed in our foreign commerce	12,000,000	12,000,000
11 The profits of the capital employed in domestic trade, and the profits of skill and industry	28,000,000	28,000,000
In all	102,000,000	125,000,000

Source: Pitt (1798 [1940: 236-7]), re-produced in Beeke (1799: 4) and Bell (1799: 74)

For Pitt, as for Pulteney, the productive sectors include the owners of capital and producers of goods from mines, canals, domestic trade, foreign commerce and the professions. But there was no indication that this national income was "derived" from a national stock. The taxable income of productive labour was £102m, and following Beeke (1799: 4), one can add annual incomes under £50, which would be exempt from the tax under Pitt's system. The wealth of the nation somehow contributed to the "most flourishing degree of national commerce" through the return on land and capital, as well as the profits of the professions and natural resources (Pitt 1798 [1940: 239-40]).

What we today would call the service sector, where labour is applied without any form of tangible output, is conspicuous by its absence, except perhaps in row six, with the entry for "profits of professions." What Pitt is referring to by professions is the craftsmen and skilled labour which produce goods, not services. This is particularly evident from the criticisms of Pitt's account by two English economists, Benjamin Bell (1799: 29, 59, 67) and Henry Beeke (1799: 39, 44-6). They repeatedly pointed out that Pitt's estimate of the nation's income neglected "Artificers in every line, even common servants, [who] should be well paid" (Bell 1799: 38). As English academics and readers of Young and Davenant, where all labour was treated as productive, they wondered why such incomes had not been included.

> To these various sums we have still a very important one to add, which Mr. Pitt has not thought proper to state ; but which, there is reason to believe, may with as much certainty be depended upon as any of the others. I mean the incomes of artificers and others not depending on capitals: such as are paid solely for ingenuity and labour to those in the inferior classes of life, in like manner with the fees and other payments of professional men in the higher ranks of society.
> (Bell 1799: 67)

> In order to form some idea of the profit of the internal trade of Great Britain, we must first endeavour to estimate the *total* clear income of the nation; not only that which is obtained by an employment of capital, but also the whole annual gains by personal industry of all individuals, of every rank of the community.
> (Beeke 1799: 39)

Pitt had excluded the service sectors where income was "not depending on capitals," or people were "paid solely for their ingenuity" and "personal industry" – but why? For Pitt, and Pulteney, as readers of the *Wealth of Nations* and friends of Adam Smith, these activities were unproductive. Unproductive labour took income away from the national wealth and contributed nothing in return. As such, taxing unproductive income was tantamount to taxing the productive factor that employed them, meaning the productive factor would be double-taxed. This would be to the productive factor's loss and therefore the economy's loss. Below I argue that such a perspective is defensible from a reading of the *Wealth of Nations* (1776), but it is equally clear from Pitt's critics.

1.2 The final critics of Adam Smith's economy

The Rev. Henry Beeke and Dr. Benjamin Bell objected to Smith's economy and referred to "the authority of Mr. Arthur Young, the celebrated improver and author" to make their case (Bell 1799: 65). Bell and Beeke were representative of the new British discourse in economics which took place in academia, but their source of reference was not academic. They were of a scholarly background but, in a time when the economics debate had moved to Scotland, both Beeke and Bell were based in London. They each published an independent revision of Pitt's estimate including the service sector (in row 9 of *Table* 7.2), which Beeke aggregated into a "gain by labour" and Bell separated across three sectors. *Table* 7.2 provides a comparison between similar entries in the accounts, but it should be noted that while Bell's figures appear to include Scotland, Beeke has Scotland accounted for separately. They both arrive at a national income similar to Pitt's, to which they add a service sector.

Table 7.2: Objections to Smith's economy, 1799

	Henry Beeke's Estimate		Benjamin Bell's Estimate	
1	Land rents	20,000,000	40,000,000	Rents of Land
2	Farming Profits	15,000,000	35,000,000	Profits of farming
3	Tithes	2,500,000	5,500,000	Amount of Tythes
4	Houses	10,000,000	6,500,000	From rents of houses
5	Funds	15,000,000	15,500,000	Income from money in the public funds
6	Foreign Possessions	4,000,000	5,000,000	Incomes spent in Britain, arising from properties in other countries
7	Foreign Trade	9,500,000	12,000,000	From the capital employed in foreign trade
8	Timber, Mines, &c	4,000,000	5,000,000	From canals, mines, and fisheries
9	Gain by Labour	100,000,000	28,000,000 70,000,000 2,500,000	From the capital employed in domestic trade Incomes of farmers, manufacturers, and others, from fifteen to sixty pounds a year Income of professional men
10	Home Trade	18,000,000	5,000,000	From the retail trade over the nation
	Shipping	2,250,000	6,000,000	From money in bonds and bills including capital in banks
	Tolls &c.	500,000		
	Scotland	8,500,000		
		209,250,000	231,000,000	

Source: Beeke (1799: 53), Bell (1799: 74)

The two accounts differ for a number of reasons, but they are similar in their treatment of services. Beeke (1799: 7-8) complained about the trouble with getting reliable land acreage, and the difference in available estimates of agricultural yield explains the major difference between the two accounts for land rents and farm profits. Bell used a higher acreage estimate – including Scotland – and a slightly higher yield to get his total (Studenski 1958: 43-50). The entries for Beeke's "gain by labour" (£100m) and Bell's three types of wage earner (£28m domestic trade; £70m farmers, manufacturers and others; and £2.5m for professionals) in row nine are almost in complete agreement. In both accounts, the service industries in row 9 of

Table 7.2 were estimated to yield approximately £100 million, leaving their estimates of the remaining 'productive' industries at £109m and £130m, either side of Pitt's original estimate of £125m.

These adjusted national accounts were not used for the new tax system, which was approved in the House of Commons on the basis of Prime Minister Pitt's proposal (Coupland 1940: 244). Beeke's and Bell's estimates were presumably well received by English policy advisors who still read Arthur Young, but the academic response was far from positive. According to Studenski (1958: 50), Friedrich Gentz (1800), an "eminent German publicist, and admirer of Adam Smith" wrote a review of Beeke's account. He agreed with Beeke's figures but removed one third of the income of labour to reflect the loss from unproductive employment. This reduced the national income of Great Britain to £195m (Gentz, cited in Studenski 1958: 51). Even though Beeke re-published his national account in 1803 with revised figures, it was in vain. The government, led by Smith's pupil, continued to define an economy with an unproductive sector. The national accountants who measured the economy for the government took this distinction from Adam Smith.

2. Adam Smith's new perspective on the economy

The first national accounts in the late 18th century were done by acquaintances or admirers of Adam Smith. Today, there is a wide range of scholarly work on Smith, and it is not my intention here to discuss whether the national accountants who read him were 'right' in their interpretation. Rather, I will present my hypothesis for why they read Smith the way they did, and argue that this reading persisted until the marginalist revolution in the 1870s.

In *The Wealth of Nations* (1776) Adam Smith presented a new view of the economy by criticising – and discarding – what he saw as the two available but flawed definitions of the economy. The Physiocratic economy where only agriculture could generate income was fundamentally flawed for Smith. He argued that "the capital error of this system, however, seems to lie in its representing the class of artificers, manufactures and merchants, as altogether barren and unproductive" (Smith 1776, IV, ix: 29). As is well established in the literature, Smith saw manufacturing, or industry,

as productive; Physiocracy plainly treated it as sterile (Groenewegen 1969, Skinner 1995).

Secondly, Smith also disagreed with past British definitions of the economy. He argued there was a unified theory of the economy in Britain, deriving from Thomas Mun's treatise, "which however foolish has been adopted by all succeeding writers" since 1630 (Smith 1776, IV, i: 7). This "mercantile system" (Smith 1776, IV, viii: 1) defined an economy which could only grow through a positive balance of payments – as advocated by Mun (1630 [1664: 34]) – coupled with some form of specie importation as "the wealth of a kingdom has by almost all authors after Mun been considered as consisting in the gold and silver in it" (Smith 1776, IV, i: 7). As I have argued throughout this thesis, there was no single author who could be associated with such an economy, and there was nothing like what Smith defines as mercantilism before him. In many ways Smith's rhetorical device is reminiscent of Keynes's construction of a 'classical paradigm' which he used to launch his own theory and definition of the economy, discussed in chapter 9.

Despite this overarching definition of mercantilism, Smith had relatively little to say of the British authors who preceded him. From the second edition of the *Wealth of Nations* he declared that "I have no great faith in political arithmetick" (Smith 1776, IV, v.b: 30), which he saw only as a set of calculations relating somehow to other mercantilists. In the six editions of the voluminous *Wealth of Nations*, Misselden, Malynes, Defoe and Young are never mentioned, and neither are Gournay, Voltaire or Turgot's ideas in relation to France. Petty and Davenant only appear as supporters of Gregory King, who was, to Smith, a mercantilist just like Matthew Decker.

Smith's characterisation of mercantilism has only been critically examined in the last 60 years. Coleman (1969) criticised Smith's invention of mercantilism and argued that there was no consistent economic doctrine – at all – during the 17th and 18th century. While I agree that Smith's depiction of mercantilism does not relate to any particular author, I hope this thesis has provided a counter-point to Coleman's claim that there was no consistent economic theory during the 'mercantilist age' from 1620 to 1775. There were *several* consistent definitions of the economy, none of which was

described by Smith's mercantilist label. Others have argued that there was no unified mercantilist theory (Judges 1939, Schumpeter 1954, Ekelund and Hébert 1990, Magnusson 1994), but the notion that mercantilists were those who wished to maximize a balance of payments surplus while increasing domestic specie holdings remains a popular characterisation of the period nonetheless (Heckscher 1994, McClusker 2001).

Smith contrasted his proposed economy with these supposed mercantilists and the Physiocrats, suggesting that both agriculture and international trade were part of the economy. The Physiocratic and mercantilist definition of the economy – and the resulting policy recommendations – therefore missed the mark in promoting national wealth, as they did not emphasise the fact that productive labour generated value which would become the national wealth. As only certain types of labour provided national income, Smith felt it necessary to spell out the difference between productive and unproductive activities:

> There is one sort of labour which adds to the value of the subject upon which it is bestowed: There is another which has no such effect. The former, as it produces a value, may be called productive; the latter, unproductive labour. (Smith 1776, II, iii: 1)

Here Smith had inserted a footnote, distinguishing his label of productive and unproductive from the Physiocratic one: "Some French authors of great learning and ingenuity [the Physiocrats] have used those words in a different sense" (Smith 1776, II, iii: 1). The problem with the physiocrats was that they treated all non-agricultural output as unproductive, but they should have only counted the service sectors. Smith then continued:

> Thus the labour of a manufacturer adds, generally, to the value of the materials which he works upon, that of his own maintenance, and of his master's profit. The labour of a menial servant, on the contrary, adds to the value of nothing… A man grows rich by employing a multitude of manufacturers: He grows poor, by maintaining a multitude of menial servants. (Smith 1776, II, iii: 1)

Manufacturers generated goods that maintained the value of their labour to be traded or saved for the future. Service providers, such as menial servants, left behind no commodity and were therefore unproductive. They were a cost to the person who hired them with his accumulated wealth and thus a cost to the nation. The more commodities were produced the richer the nation, while more services simply meant a bigger drain on the economy. It was such a standard idea that Baxter, in his national income survey a century later, stated:

> Occupations have been classed by political economists in two categories: the Productive, such as agriculture or manufactures,– and the Non-Productive, such as the army or domestic service. (Baxter 1868: 67)

One could argue that Smith himself thought other things defined the economy (cf. Kennedy 2008). But my point is that policy makers and national accountants followed Smith's productive-unproductive definition of this 'classical economy' for the next 100 years, and tended to class all service sector jobs as unproductive.

2.1 The problem with national accounts from the 19th century

Unlike the 17th and 18th century, there are many histories of national accounting that include the 19th century (Stamp 1916, Studenski 1958, Deane 1956 and 1957, Kendrick 1970, Vanoli 2005 and Tily 2009). The following two sub-sections aim to show why so much scholarly work on the period has failed to identify how Smith's definition of the economy dominated British thought in the 19th century. The earliest histories of economics simply claim there was no economic discourse of empirical interest prior to Smith's work (McCulloch 1825, Mavor 1889) and most historians of economics have followed Smith's own assertion to that effect. The problem is that each history of the 19th century national accounts approach the period with a particular intent – usually explicitly stated - and end up paying little attention to what the national accountants at the time were trying to achieve. A few engage in whig history[3] looking for how our modern notion of GDP evolved from the 17th century (e.g. Studenski 1958) while others are more interested in building consistent data-series of GNP, and so (quite justifiably) do not really care what is being measured at

[3] see Warren (1998) for a review of the concept

the time (e.g. Maddison 2007). The literature agrees that the time from 1776 to 1870 was 'different' from the 20th century, but there is no discussion of *why* it was different, or what that meant.

Phyllis Deane (1956, 1957) is all too aware that the economy was defined differently in the 19th century. But her intention is to construct a historical table tracing GNP national income to evaluate the growth of Britain since the 19th century. In doing so she goes back and corrects Beeke's and Bell's two sets of figures but decides to ignore Pitt's account, because Beeke and Bell were more representative of how Deane defines the economy. In 1956 the economy was defined as GNP, and of course to Deane, Pitt's empirical estimates are not as useful, but she unnecessarily concludes that they cannot be as important as Beeke's and Bell's accounts which included the service sector. This is despite the fact that the Prime Minister and the House of Commons ignored Bell and Beeke and (of course) used the Prime Minister's own figures. When Deane takes on Colquhoun's (1814) account for 1806, which like Pitt's account was formulated according to the productive-unproductive definition of labour, she decides to "add £6 million for domestic servants to bring Colquhoun's total into line with" what she had estimated for Beeke and Bell (Deane 1956: 340).

For Deane, the estimates by Beeke and Bell, which had failed to affect policy and were revised by Gentz (1800), should have been the account of choice at the time. Why? Because they were closer to the 1956 idea about what an economy was. Her aim is to produce consistent time series of GNP and from that perspective, the accounts by Beeke and Bell are the estimates of choice of course. But then it looks to the modern reader that the early 19th century economists had little grasp of empirical methods and were empirically naive. The national accountants in turn appear collectively incompetent, as Deane is forced repeatedly to add service incomes to every account she encounters. This is pursued in almost every similar history, with Maddison's work the most cited example of historical 'growth' series (Maddison 2007). His work propagated the consensus that empirics only began to be seriously pursued in the late 19th and early 20th century (Desrosières 1998).

This is a misunderstanding due to the continued search for past data on a GNP-like economy. Such a search for data is no help in understanding policy decisions or economic theory prior to the 1940s when GNP is invented - as I show in chapters nine and ten. If we want to understand the economics of the past, we need to appreciate the sentiment that "the past is a foreign country: They do things differently there" (Hartley 1959: 9). The world was different then, and it was defined and therefore measured differently then. I argue that the 19th century economists knew exactly what they were doing, as their economy was defined by the productive labour which added to the national wealth. Colquhoun's 1814 national account even provided statistical tables explicitly designed to indicate to the reader which parts of the economy were productive. He did so by explicitly labelling one set of labour as "Productive Labourers by whose exertions a new Property is created every year" and another as "Unproductive Labourers, whose exertions do not create any new Property." His figures and titles are re-produced in *Table* 7.3 (Colquhoun 1814: 109)

Table 7.3: Classical economists separated the productive and unproductive, 1814

Productive Labourers by whose exertions a new Property is created every year				Unproductive Labourers, whose exertions do not create any new Property			
	Families	Persons	Income £		Families	Persons	Income £
Agriculture, Mines, &c.	1,302,151	6,129,142	107,246,795	Royalty Nobility Gentry	47,437	416,835	58,923,590
Foreign Commerce, Shipping, Trade, Manufactures, Fisheries &c.	1,506,774	7,071,989	183,908,352	State & Revenue Army Navy Half-Pay Pensioners	152,000	1,056,000	34,036,280
Fine Arts	5,000	25,000	183,908,352	Clergy			
Total	2,813,925	13,226,131	292,555,147	Law Physic	56,000	281,5000	17,580,000
				Universities Schools Misc.	45,319	567,937	17,555,355
				Paupers	387,100	1,548,400	9,871,225
				Total	687,856	3,879,672	137,966,225

Source Colquhoun (1814: 109)

It can hardly get clearer. Colquhoun, who was a social reformer, even classified the royal family, education and medicine as "unproductive" and then presented his work to the House of Commons, to some acclaim. Anyone who did not create new tangible

output that could be added to the national wealth was not productive, which in turn meant they were a cost to the economy. Productive labourers in agriculture, mining, commerce, manufacturing etc. produced goods or assets which could be added to the national stock. It was not for lack of data that Colquhoun had excluded the service sector; it was because they were not contributing to the economy as defined in the 19th century.

> Thus it would appear, that more than 1/5th part of the whole community are unproductive labourers, and that these labourers receive from the aggregate labour of the productive class about 1/3rd part of the new property created annually. (Colquhoun 1814: 109)

The unproductive royal family member, politician, clergyman, teacher and pauper were a drain on the 19th century 'classical' economy. The concern at the time, as today, was whether you contributed to the economy or not. The economy was simply defined differently. Deane (1956, 1957) and Maddison (2005, 2007), in their search for a consistent time-series of measures for their definition of the economy missed this and instead 'corrected' past estimates. Their purpose was of course quite different from mine as they were constructing datasets, but when other historians read these – very impressive – data, the tendency was to think of the pre-1940s world as empirically naïve. Explaining economic policy in 1790s Britain based on GNP data-series is about as useful as explaining international communication by the amount of copper-wire for phones laid in Britain in 1790. Both tell us a lot about the present day situation and how we got here, but very little about what was happening then.

2.2 The problem with our histories of national accounting

Other historians, often reading Deane, Maddison and other data reconstructions, have composed histories of national accounting which either focus on data or take a Whiggish stance, treating the underlying economy as an invariant concept. From 1779 to 1870 there were eleven national accounts according to both Studenski's (1958: 51, 118) and Tily's (2009: 357) update of Stamp's list (1920). But when you compare the two lists, the only commonality is Patrick Colquhoun's national account:

Table 7.4: How are two 'complete' lists of accounts for 1776-1870 so different?

Studenski's list			**Tily's & Stamp's list**	
Author	Published	Coverage	Author	Coverage
William Pulteney	1779	1779	Giffen	1783
William Pitt	1798	1798	Mulhall	1800
Benjamin Bell	1799	1798	Colquhoun	1812
Henry Beeke	1799, 1803	1798	Giffen	1835-40
Patrick Colquhoun	1814	1812	Levi	1851
John Gray	1825	1818	W. Farr	1852
Joseph Lowe	1823	1822	Bowley	1860
Pablo Pebrer	1833	1831	Levi	1864
William Spackman	1847	1841	Levi	1867
William R. Smee	1846	1846	Baxter	1867
Robert D. Baxter	1867, 68, 69	1867-70	Bowley	1870

These two supposedly complete lists are different because each author is looking for a different story to tell. Stamp, who was writing in the 1910s and 1920s, was one of the leading national accountants who opposed the classical economy of productive and unproductive labour in favour of an economy that included all labour. The studies he cited were all written after 1880 and used Bowley's 1895 definition of national income, which was private income derived from the wages earned in industrial and service employment (Bowley 1895: 248). Josiah Stamp was Bowley's student, and while he included Colquhoun's (1814: 96) national income of £431m, he neglects to mention that this was income "arising from the use of capital combined with human labour and machinery" excluding the unproductive or service sector employment (Colquhoun 1814: 96). Stamp's list, updated by Tily, is a list of 'correct' national income estimates for the 19th century, if you define the economy as including all types of labour. That is exactly what Stamp did (Stamp 1914, 1920). His aim was to provide the empirical background for a consistent dataset of growth for the UK, similar to what Deane (1956, 1957) attempted fifty years later. The difference between the two authors is that Stamp was looking for historical precedents of the 1900s definition of the economy, while Deane was looking to provide a consistent series of data based on the 1950s definition of the economy – those two definitions were not the same.

A different problem appears in Studenski's (1958) seminal history of national accounting methods where he traces the evolution of GNP from 1600 to the 1950s. If an archetypical 'whig historian' looked back on the long 19th century, the two periods

1776-1870 and 1870-1913 would be different. I would argue they were different because they subscribed to two different definitions of the economy. A Whig historian looking for how our modern economy had evolved would instead suggest that there were not different ideas of the economy, but a series of improving definitions, slowly approaching what the invariant (GNP) economy *is*. This is exactly what Studenski did.

> During the last quarter of the [19th] century the concept of national income was greatly clarified, first by Alfred Marshall... The effect of their [Marshall and the marginalists] work was to rid the concept of the national income both of the misconception introduced by Adam Smith, and of the equally misleading corrections of them made by Baxter [1868]… The nineteenth-century development of national income estimating in England was rich in both theoretical advancement and practical application, and as the century ended, England was still the world's leader in the field. (Studenski 1958: 118-9)

For Studenski the national accounting system is a tool which changes over 400 years and which in 1958 is an almost perfect tool for estimating the economy empirically. He assumes that the economy is an invariant concept for which the tools have slowly been developing. This is the more frustrating because Studenski identifies a "Smithian Concept" of the economy (Studenski 1958: 50) around the productive-unproductive division of national income, but calls it a mistake. He carefully explains, in great detail, how the empirically minded economists from 1776 to 1870 were all enamoured of a productive-unproductive distinction, which I agree with, but he does not take the logical step to say that this was an essential part of the definition of the economy during that period. Rather Studenski implicitly argues that economists were thinking along GNP lines. The 19th century was good for England, because in the race to be first to achieve the 1958 definition of the economy, the English (or British by then) were, despite a set-back, "still the world's leader in the field." What field? They cannot have been leading the GNP development race, because in 1900 there was no such thing.

> The development of meaningful concepts, in turn, has depended on the formulation of rational theories of economic production, inasmuch as national income is merely a monetary expression of national product. Several theories of

> economic production, and hence of national income, have been advanced during these past three hundred years, but of them only three have survived. (Studenski 1958: 11)

For Studenski, as with any of the following histories of national accounting (Vanoli 2005, Bos 2009), the nineteenth century did not have a different idea about what the economy was, they simply had a 'wrong' tool for interpreting an underlying reality which is constant. Studenski is not a strict Whig historian. He proposes nothing like a straight linear narrative, which Warren (1998) presents as a Whig tendency. Nor does Studenski make any strong moral judgements of past authors. What he does, and others follow, is to bracket the national income estimates into categories and explain the mistakes and omissions relative to modern standards.

What I propose instead is that the tool – the accounting method – has been constant over 450 years. Indeed, double-entry accounting has remained relatively unchanged since it arrived in England in the 1550s (Poovey 1998). It is not the tool that has changed, but our definition of the world and its economic realm. I argue that the concept of the economy has changed. This matters if empirics are the basis for social policy, which they have been since the 1620s in Britain. For Prime Minister Pitt in 1798, it was clear that the national income was the productive output of £125m and that government policy should revolve around this economy. For Walpole in the 1740s it needed to revolve around the national debt and public faith in the credit system, and for Davenant before him it was the investment in national assets and the domestic trade.

Just as Arthur Young wrote in 1769, when defining and comparing the "general wealth" of countries, some care must be taken because "the generality of politicians will consider this article as the test of every other" (Young 1769: 413). The definition of the economy, which comes to empirical expression through the national accounts, has changed often over the last 400 years. If we apply that idea to Studenski's history of national accounting, the period from 1776 to 1870 stands out as a period which defined its economy in a very particular way, as the classical economy.

3 Challenging Smith's classical economy

Smith's economy was challenged in the 1860s by three very different people: Statistical society member Robert Dudley Baxter, Karl Marx and Alfred Marshall. Both Marx and Baxter seem to build on the existing definition of a classical economy, which they criticise by arguing that transportation and carriage should be considered "quasi productive" (Baxter 1868: 68), as it added value to the final sales price of a good.

For Baxter the classical economy was problematic because "production appears to me to cease at the moment when it has lodged the product in the hands of the wholesaler" (1868: 68). It was not the type of labour or output which mattered but the final sale of an output. Baxter estimated that the national income from the upper class, middle classes and manual labourers in agriculture and manufacturing had produced £814m worth of goods in 1868, which could be added to the national stock (Baxter 1868: 64). In that, he adopts a definition similar to the classical economy: there is a national stock to which productive labour could add; one just had to expand the notion of what was productive. It was with Marx's critique of capitalism and the treatment of certain services that the notion of productive was revisited. Ironically perhaps, Marx set out an economy very much along Smith's definition, much to the frustration of Studenski, who thought Marx was stopping the evolution towards a GNP "comprehensive production concept," where both goods and services were included in the economy (Studenski 1958: 12).

> All economists with the exception of Marxists have agreed on the soundness of the comprehensive production concept… [whereas] among the Marxists there is a similar unanimity of judgment as regards the soundness of the restricted material production concept, but this unanimity, at least in Soviet Russia and some of her satellites, is more required than voluntary. (Studenski 1958: 12)

In 1958 all economists had agreed to Studenski's category for GNP - the comprehensive production concept - except the Soviet Marxists who doggedly continued to count only the value of material output – or productive labour output – regardless of what Marx or Smith may have intended. Until 1990 Russia and China defined their economies, and national income, differently from the UN System of

National Accounts. They ignored the whole service sector – a method reminiscent of what I call the classical economy. If the Soviets had the opportunity, Studenski presumed that they would revise their system and come to their senses. It is perhaps ironic that, in quoting Marx, who was so controversial in the 1950s, Studenski never pauses to ask why no-one questioned this very basic statement when Marx made it in the 19th century:

> All these phenomena of capitalist [service] production are insignificant compared with the whole. We can therefore disregard them completely. (Marx 1861 [1952: 327], cited in Studenski 1958: 22)

This is perhaps the least interesting part of Marx's argument in the passage, as he has just argued that while a teacher may be unproductive in terms of granting a service to the public, "vis-à-vis his employer he is a productive worker." Studenski skips this and limits his quotation to the above, to make his point that Marx should be considered controversial to the 1950s reader and that Marx was fundamentally flawed in his exposition. In fact, Marx was being controversial in the 1860s by questioning the classical economy, saying that the service sector should be counted if it grew. This is further substantiated if one considers what is called "Marx's critique of Smith" and his critique of the economy (Tregenna 2009: 11):

> Neither the special kind of labour nor the external form of its product necessarily make it "productive" or "unproductive". The same labour can be productive when I buy it as a capitalist, as a producer, in order to create more value, and unproductive when I buy it as a consumer, a spender of revenue. (Marx, 1861: [1956: 160-1])

When Marx challenges Smith, he is challenging his contemporary definition of the economy. He wrote that transportation should be considered as productive labour (Tregenna 2009) just as Baxter (1868) did a few years later. Marx was not proposing that the economy was different from what Smith had said. In fact he maintains a distinction between productive and unproductive labour. Marx, like every other economist at the time, was simply working within the prevailing definition of the economy. Studenski (1958) worried that "Adam Smith could scarcely have

anticipated" that his idea of unproductive labour would be adopted by the communist Soviet Union (Studenski 1958: 22). That is perhaps not very peculiar because the economists of the Soviet Union took their cue from an author embedded in the classical economy – and not an outright challenger like Marshall – so with a 'materialist reading' of Marx they excluded all services in their economic accounts (Mandel 1976). I believe this emphasises the point that, from Pulteney in 1779 to Marx and Baxter in 1868, the definition of the economy in Britain remained the same – the classical economy. It was laid down by the national accountants who read in Smith a productive-unproductive division of the economy. They proceeded to work in those terms for a century, and beyond that in the communist nations who did not adopt Marshall and his followers.

A final point to consider in support of a 'classical economy' is perhaps to ask why a labour theory of value was so important to the classical economists. Is it perhaps because the economy they agreed on required a distinction between what labour could generate value and what labour could not? The value theory debate continues today, primarily in the Marxist traditions and historical literature, but it was discarded in the 1870s by the marginalists. It was never even considered before 1776. Why? Because, I argue, the classical economy was defined by the separation between productive and unproductive labour, a separation not made in Britain before 1776 or after Marshall's rejection of Smith in 1879.

3.1 Marshall's rejection of Smith

In 1879 Alfred and Mary Paley Marshall argued that "wealth consists of material wealth and personal or non-material wealth" (Marshall 1879: 6). This re-ignited the debate on what defined the economy and how to account for its growth. The Marshall's insisted that both goods and services should be included as part of the national income. They "established parameters (albeit without any formal structure) for the definition and the calculation of national income" but did not perform the calculations (Kapuria-Foreman and McCann 2009: 13). Part of the reason that the Marshall's did not do the calculations was that official measures of the economy were now coming from the national census office. Indeed, since Spackman's national account and census in 1841, official institutions (such as the Census Bureau) had become responsible for providing statistics to government (Desrosières 1998). The

debate on the economy was still an empirical debate, but it had to take place within public statistical institutions, between academic economists and government statisticians.

Arthur Bowley, Alfred Flux, and Josiah Stamp would compose national accounts from 1895 to 1929 in "what might be characterized as a first era of national income" estimates, based on Marshall's concept of the economy (Tily 2009: 340).[4] They were perhaps the ideal candidates to take up Marshall's theory and redefine the economy. Both Bowley and Flux were students of Marshall, all three were members of the Royal Statistical Society, and they did their work in the Census Bureau. Tily (2009) provides a comprehensive review of the national accounting practices and how the economy came to be conceptualised in these British accounts from 1895 to the Second World War. So I will settle for a very brief review of this goods-and-services economy.

Based on Marshall's work, Arthur Bowley estimated the total private income received by the population, regardless of their type of employment, and defined this as the "whole national income" (Bowley 1895: 248). Josiah Stamp was Bowley's student and together they published an estimate of the "*real home-produced income per head*," expanding the notion of national income to include the value of income-equivalent consumption and private investment (Bowley and Stamp 1927: 55). Alfred Flux, as the director of the census of production, was responsible for estimates of the value of production and its contribution to national income in terms of the profit – or value added – of the services and goods produced by the private sector. Flux's definition of the national income was the total private consumption and investment as he "allocated production between consumption and investment" (Tily 2009: 338). Flux's national income was the sum of private expenditure and private savings, not an aggregate of consumption and investment, so it differed slightly from Bowley's and Stamp's concept.

[4] See Bowley (1895, 1900, 1910, 1919, 1922), Flux (1912, 1929), Stamp (1916), Bowley & Stamp (1927).

In 1932 Colin Clark published his self-funded *National Income 1924-31*, starting what Tily (2009: 332) calls a "second phase of developments" in Marshallian national accounting. The work was reviewed favourably by Simon Kuznets (1933) in the USA and was welcomed by Colin Clark's fellow economist at Cambridge, John Maynard Keynes who in 1933 wrote Clark, "I have just finished reading your book carefully… I think that it is excellent. An enormous step forward. I hope it is selling all right" (Keynes 1933, 2 Jan).[5] Keynes welcomed Clark's work for two reasons: First, Keynes was a great and consistent promoter of better statistics (Tily 2009). Secondly, Clark had constructed his national account around Keynes's "fundamental equations" in the *Treatise of Money* (1930) (Tily 2009: 344). This meant that Clark's national income account added up all business investment and consumption to get national income (Clark 1932: 117), in trying to implement Keynes's theory and estimate Richard Kahn's (1931) multiplier. Clark quickly became an authority on national income statistics in Britain, a position he cemented with *National Income and Outlay* (1937), where national income was again defined as the total private income earned for consumption and investment. The definition of the British economy was now the aggregation of a circular flow of goods and services, received by private individuals, and spent on consumption and investment. The classical economy was no more.

4. The Long 19th century comes to an end

Keynes once remarked, perhaps apocryphally but tongue in cheek regardless, that it was fortuitous how Shakespeare came about just as the world could afford him. One might be tempted to make the same statement about Adam Smith's *Wealth of Nations*: it was fortuitous that such a definition of the economy should emerge just as social circumstances allowed academic policy advisors prominence and the world became industrialised. To me, this analogy is similar to arguing that it was fortuitous that the atom bomb came about just as the Americans needed it in 1945. The classical economy did not simply emerge as some best practice during the long 19th century; it was adopted through the efforts of Adam Smith to convince politicians first and academics second. The academics and national accountants who agreed with Smith's

[5] Tily (2009: 343-4) discusses how Clark's work was received, and Keynes would continue to use Clark's statistics in his work, referring to his income distribution data as "undisputed facts" (1939: 34) and noting that Clark's "views must be much respected because we all owe to him an immeasurable debt within this field" of national accounting and data collection (1940b: 61).

definition of the economy played a big part in orienting British economic policy towards investment into industrialisation and away from services, as manufactured goods were defined as the area of economic growth.

Through continued application by the supporters of Smith's ideas in the late 1770s, the productive-unproductive definition remained a relevant and useful definition of the economy throughout the first three quarters of the 19th century. It was the basis of every national account used for policy work, and even after the census of 1841 and the Income Tax Act in 1842; the definition of the economy remained the same. As Spackman wrote in the 1847 Census report:

> And from one or the other of these [outputs] does every individual in the land derive his income or means of support. (Spackman 1847: xii)

He was referring to *Table* 7.5, where the classical economy was measured as part of the census report's national account:

Table 7.5: Spackman reiterates the classical economy in the census of 1841

Our annual creation of wealth may be thus stated:	£
Agriculture	250,000,000
Manufactures, deducting the value of the raw material	127,000,000
Mining interests	37,000,000
Colonial Interests	18,000,000
Foreign Commerce (including the shipping interest), 10% on the amount of our exports and Imports	15,000,000
Fisheries	3,000,000
	£ 450,000,000

Source: Spackman (1847: xii)

The nation's income was the productive activity which produced tangible outputs like agriculture, manufactures, mining and fisheries, as well as the revenues earned through foreign trade. Every year the nation added to its wealth by adding more capital goods to the economy. This was accepted by the "government classification" applied by the 1841 Census (Spackman 1847: x). Marx (1861) was probably less controversial in his treatment of productive labour than Baxter (1868), and definitely

less controversial than Marshall, who rejected the classical economy outright. But this was much later.

In the 1770s Smith's definition of the economy had to replace, and cover up, a long tradition of national accounting and theorising about the economy. Smith did so very effectively by presenting Physiocracy on the one hand, while inventing mercantilism with the other, and then refuting both. Smith's mercantilism had little relation to any of the dominant theories of the economy used by policy makers during the previous 140 years. This did not matter as long as Smith could convince his followers and the policy makers that his description of the past was correct. To do so, Smith appears to have cherry-picked his references to the past. He included Postlethwayt's *Universal Dictionary* (1757) for statistics and Matthew Decker's (1744a) book, written for political purposes, as an "excellent authority" on mercantilism (Smith 1776 VI, v.a: 20). Decker's book never shaped economic policy making, while those who criticised ideas resembling mercantilism, like Hooke or Young in the late 18th century or Davenant, Petty and the *British Merchant* before them, were avoided by Smith, even when some of them were the major economic influences of their time. Smith's rhetoric was clearly successful, as the earliest histories in the field accepted his view completely (McCulloch 1825, Mavor 1889) and we have since repeated this story of empirically naive mercantilists who lacked sophisticated economic reasoning prior to 1776. I hope my thesis provides a counterpoint to this trend.

That said Smith truly shaped the economic policies of his age. Through the work of Pulteney (1779) and then William Pitt (1798), Smith's classical economy joined the mainstream. Smith's early English critics were rejected in writing by Gentz (1800) and in practice by the policy makers, who used the classical economy as the organising principle of their national accounts and policy. This is the case throughout the long 19th century as Colquhoun (1814), Lowe (1823), Spackman (1847) and others presented empirical accounts of Smith's economy.

Following Marshall's critique in the 1870s the definition of the economy began to change. This led to the idea, in Britain, that consumption and private investment flows were the national income, and to the rediscovery of the notion that the economy was a

circular flow, where all types of private employment are productive. While Smith had aimed to convince politicians and policy makers first, Marshall had gone a different route. In the 1880s Marshall sought to influence his economics students, and it was those students who went on to work in the administration (like Stamp and Bowley), who implemented the new definition of the economy. Marshall did not attempt to convince the policy makers first, as economics had become an established academic field in the late 19th century. The scholars had not only replaced industrialists as policy advisors; they had also displaced the traditional powers who chose theories. Policy makers and politicians were less important than fellow academic economists in evaluating whether a new theory of the economy was suitable.

The next chapter looks at this issue in more detail for the 1930s and 1940s. The definition of the economy set out by Alfred and Mary Paley Marshall, and Colin Clark's national accounts of 1932 and 1937 were used by Clark's students who worked in the British government. But this definition was challenged within the administration when Britain found itself on the brink of war and in need of a definition of the economy that could account for both the private and the public sectors. The new definition of the economy and its inventor – John Maynard Keynes – had first to convince his government colleagues, economists and bureaucrats, and only then the politicians. To safeguard his definition within the administration, a Central Statistical Office was set up, with Keynes's new definition of the economy at the core and statisticians and economists around it. A similar administrative story would play out in the USA, discussed in chapter nine, because by the 1940s government administration had a central role to play in defining the economy.

This generation of economists, and indeed every generation since, could not settle for convincing a prime minister to create his own national account, as Pitt had done in 1798. In the 1940s one had to convince whole government departments in order to change the definition of the economy. The final three chapters show how this was done in the UK first, and then how the next stage emerged, where we today need to convince both government and international organisations to adopt a new definition of the economy.

The recent debates over complements to GDP (e.g. Stiglitz et al. 2010, OECD 2010b) miss the theoretical mark because they, like Studenski, assume the economy is invariant and defined by GDP. So I contend that the debaters are asking the wrong question and addressing the wrong audience with their answers. Like Smith, Marshall and Keynes did, we should ask 'what is the relevant economy for today's world?' – Not 'how do I best measure something important along with my measurement of the economy?' For Keynes, that question of 'what is the economy?' led to a re-orientation of what the British economy was, and in turn it changed the modern definition of the economy.

Chapter 8

Keynes convinces Britain to re-define the economy, 1930 - 1945

> "You can trust me: if [my ideas] ever become a danger, I'm going to turn public opinion around like this. [snaps fingers]
> -John Maynard Keynes, March 1946[1]

The idea that Gross National Product (GNP) defines the size of the economy was developed in the late 1930s, and it became the official definition and measure of the UK economy with the publication of a Government White Paper (HM Treasury 1941). The invention and implementation of this new economy is usually portrayed as the result of Richard Stone's and James Meade's work at HM Treasury during the Second World War.[2] In this chapter I argue that Stone and Meade were not responsible for the GNP economy but that it was Keynes who re-defined the Marshallian economy, convinced Stone and Meade to change their opinion, and then convinced the Treasury to introduce his definition of the economy as the official one. In the next chapter I will reject the contradictory claim that GNP was invented by Kuznets for the US government. Below I argue that Keynes was actively taking part in the national income estimation throughout the war and was not pre-occupied with other issues as Moggridge suggests (1992: 695). Keynes was very active and very convincing: after having "done the trick about the peace treaty[3]" as Hayek (1978: 117) put it, "he [Keynes] believed he could play with public opinion as though it were an instrument." This chapter argues that Keynes did indeed change public opinion, not so much with a snap of his fingers, but through concerted efforts at Cambridge and the Treasury.

While the current literature agrees that Stone and Meade developed GNP accounting (see Comim 2001, Vanoli 2005 or Vines and Weale 2009), the argument is primarily

[1] This quotation is attributed to Keynes in an interview with Friedrich Hayek by the Oral History Project at UCLA (Carver et al. 1983: 116). This was from Hayek's last conversation with Keynes, six weeks before Keynes's death on 21 April 1946, so I have dated it to March 1946.
[2] See Comim (2001), Vanoli (2005) or Vines and Weale (2009) for the most recent expression of this.
[3] In reference to Keynes's *The Economic Consequences of the Peace* (1919) which predicted that Germany could not bear the burden of World War I reparations as agreed at Versailles. The book shifted public opinion in Britain against the Treaty (Harrod 1951).

based on secondary sources and interviews made 40 years after the fact (as in Meade 1981 or Stone and Pesaran 1991). There does not seem to be any systematic primary source study of who developed GNP and how it became the government's preferred definition by 1941. This chapter uses primary sources to follow that development through Cambridge in the 1930s and Whitehall during the war to paint a completely new picture not only of GNP, but of Keynes the economist, the civil servant and person. In that process I re-introduce a young Richard Stone and James Meade to the history of economics, both hired to implement Keynes's definition of the economy.

Tily (2009: 352) argues that Keynes was an inspirational force in developing British national accounting, setting out the first sector accounts, as "a leading and demanding advocate, user, and producer, of economic statistics." I go a lot further in this chapter, arguing that Keynes rejected Clark's Marshallian economy, convinced Stone and Meade to change their opinion on the economy, convinced the government to change its position on the publication of national accounts, and in so doing, he changed the official British definition of the economy.

1. Getting away from Clark's 1937 Marshallian economy

Colin Clark had published the standard work on national income estimation in 1937 defining the economy along Marshallian lines. National income was the total income of private individuals from market activity, or the expenditure of private individuals on investment and consumption. This was consistent with the work of Bowley, Stamp and Flux, and it excluded government activity quite explicitly. This section argues that while Keynes used Clark's empirical estimates he disagreed with Clark's definition of the economy, in particular the idea that government expenditure was not a final output. Keynes formulated his argument with the assistance of a young German scholar whose "contribution - modest it is true - to British national accounting seems to have been forgotten" (Cuyvers 1983: 629). On 2 October 1939 Keynes wrote the Cambridge Statistician Erwin Rothbarth[4] asking him to collect data

[4] Erwin Rothbarth (1913-1944) was born in Germany and studied Economics at the LSE, graduating in 1936. From 1938 he was the assistant in Statistical Research at the Faculty of Economics and Politics of Cambridge University. He was arrested as an enemy alien on 13 May 1940 and detained until the 24 August 1940. After his release he returned to Cambridge before volunteering for the British army. He was killed in the Netherlands (near Venray) on 25 November 1944 (Cuyvers 1983: 629). Kalecki's

on national income, and savings in particular, to argue for the need for better war financing, possibly through forced saving (Cuyvers 1983: 630, footnote 1).[5] Keynes used these figures in "a brilliant lecture," according to his wife's diary (Moggridge 1992: 629), to the Marshall Society Lecture (20 October 1939) and in his articles for *The Times* on the 14, 15 and 28 November 1939 (Cuyvers 1983: 630). In calculating total savings, Rothbarth found that the saving figures and the total investment figures clashed with some of Clark's definitions (Rothbarth 1939, 29 Nov). This problem was caused by the increased share of government in national investment.

Rothbarth and Keynes started a very active correspondence on the definition of savings and investment in relation to Clark's focus on the private market. Based on this correspondence, Rothbarth published an article in *The Economic Journal* only a month later, undersigned by Keynes.[6] This article (Rothbarth and Keynes 1939) used the data collected by Rothbarth, as well as by Clark, but departed from Colin Clark's definition of national income in a significant way. Rothbarth and Keynes argued that the real point of national income was to estimate the total taxable income in the economy, not just private income earned for consumption and investment. In discussions with Kaldor, as noted by Marcuzzo and Rosselli (2005), Keynes re-iterated his "hostility to [Clark's] Gross National Income. But it is only through conversations with you and Rothbarth that I have been forced to try and diagnose clearly, exactly why my intuition was so much revolted by it" (Keynes 1940, 25 Feb).

Keynes was so much revolted because he needed to estimate the government's revenue required for the military effort, not private consumption and investment. Clark's procedure for calculating national income did not include final government expenditure. As Kaldor wrote Keynes, "you [Keynes] mentioned that one of your reasons against this procedure is that it overestimates the extent to which a reduction in consumption, or private investment, 'releases' resources for other purposes" in particular "equipment goods for War purposes" (Kaldor 1940, 6 Feb). If government

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eulogy (1944-45: 122) remembering Rothbarth spoke of an up-and-coming economist, whose "book will never be written." Kalecki failed to mention national accounting in his eulogy.

[5] Keynes reversed his position on this in *How to Pay for the War* (1940)

[6] This is an odd article in terms of its authorship: The title page mentions only Rothbarth's name, but the closing paragraph of the article is signed (in type) by Keynes. Cuyvers (1983) argued there was a close working relationship between Keynes and Rothbarth on the article.

expenditure was not included in the national income, then investment for the war effort would officially count against economic growth. The more the government spent, the less was available for private consumption and investment, thereby reducing national income. For Keynes, the ability to tax and fund the war was of paramount importance, and to him, the government seemed a valid consumer of final output. So government should be considered part of the economy.

What mattered for taxable income was the total expenditure on goods, of which government spending formed a large part, especially in times of war. Keynes and Rothbarth carried on an extended exchange of letters from December 1939 till December 1940 to make this point empirically (KCA W/4/17-75). They debated the exact shape and form of a national account in terms of equations for the total national income and expenditure accounts. Based on the correspondence, Cuyvers concludes that "it is beyond any reasonable doubt, that it was Keynes, not Rothbarth, who broke out of the conceptual cocoon of the definitions of the past and got away from Clark's output concept" (Cuyvers 1983: 633).

Rothbarth and Keynes (1939) broke away from Colin Clark in their national income estimate of £5,700m. This £5.7bn included investment in new capital (£250m) and investment to maintain current capital (£420m) just as Clark's figures had. Unlike Clarke's national income, the account added "government expenditure, central and local, including 'transfer' incomes such as pensions, unemployment relief, and the interest on the national debt" totalling £1,300m (Rothbarth and Keynes 1939: 626). The final stone of the now familiar C+I+G+(X-M) = Y was laid, and government spending was part of the economy and national income. Colin Clark had worked with a definition of the economy approximating C+I+(X-M), Keynes and Rothbarth added the government. They reasoned that this total signified "Gross taxable income… [and] it is the most useful concept for our present purposes," as opposed to Clark's focus on private expenditure, national income should include all potential output that could be taxed and this included the government's own expenditure (Rothbarth and Keynes 1939: 627). Keynes himself noted that the reason for the difference between him and Clark's results were not statistical, but conceptual:

> The differences between the figures [Clark's and Keynes's] are often due, not to discrepant statistical estimation, but to different ideas of what it is convenient to mean by 'national income.' It is therefore of more practical importance than usual to distinguish the differences of logic and definition, some of which hark back to old-established controversies, from real discrepancies in statistical estimation. (Keynes 1940b: 60)

Keynes and Clark had different ideas of what national income meant. Where "Colin Clark's Gross National Income is most misleading for most purposes and not practically useful for any," Keynes's national income could, according to him, be used in a practical manner to prepare for the war (Keynes 1940, Feb 25). In March 1940 Keynes published "The Concept of National Income: A Supplementary Note" as "Mr. Clark's *Gross National Income* seems to me to lead us into water which is unnecessarily deep" (Keynes 1940b: 65). The paper delineated Keynes's difference from Clark, and should be considered together with "a number of books and pamphlets, mostly called *How to Pay for the War*" (Keynes 1940b: 60).[7]

> My own opinion is that there are two concepts of fundamental importance and practical utility in the present context, which I will call National Output and Taxable Income. (Keynes 1940b: 60)

> These two concepts are reasonably unambiguous. They require, of course, underlying definitions of what we mean by a man's output and what we mean by his income; and it is assumed that these matters have been settled. They are also useful in many contexts, particularly in connection with the problems, which arise in war-time, of the resources of the country, physical and fiscal (Keynes 1940b: 61)

Keynes had set out the meaning of "a man's output" and "his income" with Rothbarth and felt that Britain should move on from Clark, who only counted the private expenditure and income. This was done to pursue the "resources of the country, physical and fiscal." Keynes needed to know how much the government could afford to spend.

[7] This also corrected Keynes and Rothbarth's estimate of taxable income from £5,700bn to £5,300bn (Keynes 1940b: 61). The reason for the adjustment was that the investment figures they had adapted from Clark had double-counted depreciation according to Keynes (1940b: 65)

Keynes distinguished between the *National Output* and *Taxable Income* concepts, moving away from Clark's concept of national income. The relation between the two was simple arithmetic as the taxable income of £5,300 equalled the "National output £4,850 million plus transfer incomes £500 million minus Government trading profits £50 million" (Keynes 1940b: 61). With these published clarifications, Keynes wrote and published *How to Pay for the War* (1940), thanking Rothbarth for his contribution in the introduction. Here Keynes outlined the double entry national accounting system which included the now familiar equalities defining national income: C+I+G+(X-M).

Tily (2009) notes that the 1940 accounts were also split into the now familiar sub-accounts of government tax and spending (G=T), investment and savings (I=S), and the international balance (X=M) and used the income method of national accounting. This analysis "broke new ground… [and] amounted to 'GDP at factor cost', the measure that would underpin the National Accounts for the next 50 years" (Tily 2009: 350). Keynes had gone from being a supporter to a creator of national accounts, and while he was not the only person supporting national income accounting, he was the *only* person to define the national income and economy in this manner in 1940.

2. Where GNP does *not* come from…

It would be another two years before the American government published a GNP account (Gilbert, M. 1942a) and another year before the British Government released its first *official* GNP account (HM Treasury 1941). Curiously, despite the fact that this 1941 White Paper used the same definition of national income and the economy as Keynes (1940a, 1940b) and Rothbarth and Keynes (1939), it is generally agreed that James "Meade had developed the original conceptual framework of national accounts" together with Richard Stone (Comim 2001: 217). Studenski (1958), Meade (1977), Patinkin (1983), Stone (1984), Stone and Pesaran (1991), Moggridge (1992), Deaton (1993), Comim (2001), Tily (2009) and Vines and Weale (2009) all maintain that it was the ideas and work of James E. Meade and/or Richard Stone at the Treasury which led to the concept of a GNP economy in the White Paper. This section will argue that, in fact, neither Meade nor Stone developed GNP as a concept or an accounting framework. Instead they were hired to implement Keynes's framework; they discarded their own theories and adopted Keynes's definition of the economy.

Studenski (1958), Vanoli (2005) and Tily (2009) all point to the 1941 White Paper as a fundamental document which explicitly aggregated the main components of GNP for the first time. It defined GNP by the equation Y=C+I+G+(X-M), gave the rudimentary balances which set out macroeconomic equilibrium (G - T) + (I-S) + (X - M) = 0 and balanced the three totals of Income, Expenditure and Output. As such they were the *ex-post* expression of aggregate income in Keynes's *General Theory* (1936). The available history suggests that these definitions were spontaneously arrived at by Meade and Stone and that it was fortunate that they were at the Treasury so they could influence policy makers (Vanoli 2005: 22-3). I argue that the work to estimate Keynes's GNP economy at the Treasury began quite intentionally, at the instigation of Austin Robinson,[8] who

> had been much impressed by Keynes's *How to Pay for the War* (1940) and felt that detailed national accounts should be constructed as an essential part of planning wartime production and running the economy when the war would be over. He persuaded Edward Bridges, the Secretary to the War Cabinet, to authorise him to recruit two people to give these ideas a concrete form. (Pesaran and Harcourt 2000: F148)

The two individuals Robinson hired to implement Keynes's idea were James Meade and Richard Stone. Austin Robinson himself recollects that:

> When *How to Pay for the War* was published we quickly convinced our seniors that it was right to set up a small section in the Cabinet Office to improve our National Income estimates and to make, with all the resources of government, the calculations which Erwin Rothbarth had attempted, not wholly successfully because of the limits of information, to make for Keynes. Within a few weeks James Meade and Richard Stone were at work, and the first fruits Keynes' original idea and of their labours was available in time to influence the budget of 1941. (Robinson 1983: 128-9)

[8] Austin Robinson was a Member of the Economic Section at the War Cabinet Office (1939-42), Economic Adviser and Head of Programmes at the Ministry of Production (1942-45) and Member of the British Reparations Mission in Moscow and Berlin (1945). He was the husband of Joan Robinson, and at Cambridge University Austin Robinson was a Fellow (1923-26), Lecturer (1929-49), professor (1950-65) and eventually emeritus professor (1965-93) of economics. He was Keynes's associate editor at the *Economic Journal* during Keynes's 33 years as editor.

Of all his achievements during the war, Robinson was most proud of initiating the national accounting project for which he hired Meade and Stone (Cairncross 1994: 907). Notice that Meade and Stone were hired to do the empirics to implement Keynes's ideas from *How to Pay for the War* (1940), not to develop a new method of national income estimation. Meade started at the Treasury in May or June 1940, and in June 1940 Keynes was independently 'invited' by the chancellor to join the Treasury as part of the Chancellor's Advisory Council.[9] Richard Stone was hired in August 1940 and recollects that by then "Meade was preparing the groundwork for a survey of the country's economic and financial situation and wanted somebody to help with the statistical side" (Stone 1984). What I suggest is that without Keynes it would have been just that, a survey, not a national account with a new definition of the economy.

If one accepts the argument that Meade and/or Stone independently conceptualised the GNP economy and developed a national accounting framework to measure it during 1940-41, then one would expect at least one of them to have used or formulated something resembling GNP before joining the Treasury. Alternatively one could accept Vanoli's suggestions that "they were not previously specialists in the estimation of national income, and benefitted from the exceptional circumstances that surrounded their effort, they moved more freely and consequently could be more audacious" (2005: 21-2). Vanoli argues that Stone and Meade were amateurs in national income estimation, who stumbled upon the definitions, unaware of Keynes's work. Below, it will be shown that they were not amateurs, and they were very aware of Keynes's work. Nor had they previously used anything resembling GNP until they met Keynes at the Treasury that summer of 1940. In line with Austin Robinson's recollections I argue that the national income project – which Robinson supervised –

[9] Robinson recollected that the Chancellor hired Lord Catto and Keynes as his advisors in July 1940, "and the irreverent of the Treasury soon came to know them as Catto and Doggo" (Robinson 1983: 129). Meade recollects it slightly differently, as "Maynard said that he had a bad heart and there were bombs dropping and all that sort of thing, and couldn't really serve any useful purpose on this Council unless he had a room in the Treasury. So, they gave him a room in the Treasury, and he came with his own secretary… And, of course, as soon as he got in he began doing these back of the envelope, how much we could spend, how much we could save, you know, that sort of thing. He knew me and he knew Dick Stone, both sort of young Cambridge men" (Meade 1981: 2).

was premised on Keynes's concept of the economy and that Keynes convinced Meade and Stone to change their previously established opinions.

2.1 Why James Meade did not invent GNP

Moggridge (1992: 645) argues that James Meade had "evolved the underlying accounting framework" for national income estimation by the end of July 1940. Although Meade was yet to collect the data, he had a "system of empty boxes" where the empirics could be slotted in (Deaton 1993: 477). Meade himself later suggested that he and Richard Stone together "prepared the first official estimates of the UK national income and expenditure, and we did so in a form which constituted what was, I believe, the first true double-entry social accounts prepared for any country" (Meade 1977; 1982: 1-2 is similar). Meade and Stone did prepare the first set of results, but double entry accounts was what Keynes had used in *How to Pay for the War* (1940) and was an accounting technique in use for national accounts for decades, if not centuries if one considers Gregory King's 1696 work. Meade's claim for double-entry accounting, and indeed independence and originality, is odd, because he was very familiar with Keynes's work. Being a Cambridge man, Meade had studied under Keynes from 1930 to 1931, where he

> made a close friendship with Richard Kahn and became a member of the 'Circus' with him, Piero Sraffa and Joan and Austin Robinson, which discussed Keynes' Treatise on Money and stimulated the start of its translation into the General Theory. Keynes appeared at the weekends when Richard Kahn reported to him our discussions of the week and when we met on Monday evenings at the Political Economy Club in Keynes' rooms in King's College. Thus I abandoned the formula MV = PT for I = S. (Meade 1977)

After his time at Cambridge, Meade returned to Oxford, where, among other things, he worked on short-term labour demand, calculating the elasticities of demand to investigate the fluctuations in employment. To do so, he drew up a list of statistics which he needed and circulated them privately as a "Plan of Statistical Work" (Meade

1932-34: 15).[10] This plan consisted of seven important components including "National income classified as it is earned (a) by wage-earners, (b) by property owners from property situated within the country and (c) from foreign sources other than by the sale of exported commodities" (Meade 1932-34: 16). Meade's (1932) idea of national income was similar to Clark's 1932 definition of consumption plus investment, and in response to his data query Marschak even pointed Meade to "data and investigations of the type of Colin Clark's" (Marschak 1934, 1 Nov). Meade had entries for Savings and Investment under national income, which he presumably expected to equal, given his self-proclaimed belief in I=S (Meade 1977). The aim of Meade's paper was not to estimate the national income but to use Clark's concept to estimate elasticities much as Clark (1932) had done.[11]

In 1937 Meade moved to Geneva to join the Economic Section at the League of Nations, where he produced and edited the *World Economic Survey* between 1937 and 1939 (Meade 1938, 1939), "then done by a man and a boy. I was the man" (Meade 1981: 1). The League of Nations had been producing the *World Economic Survey* since 1930 and it was, according to the League's Economics Director, "primarily a record of economic fact. Year by year an attempt is made to describe and measure the changing organisation of industry and commerce in the world as a whole" (League of Nations 1936: preface). The *Survey* was a global collection of statistics and data quantifying the economies of the world, but during Meade's tenure there was no change towards looking at national income in terms of GNP. The *Survey* under Meade was a collection of statistics without a central conceptual frame.

Meade fled Geneva, crossing France, to reach London in April 1940, worrying that the war would isolate him and his family in Switzerland. Austin Robinson knew Meade from Cambridge, and arranged for Meade to join the Government Economics Division, because he knew that Meade was familiar with Keynes's work (Meade 1981: 1). A recent feature issue of the *Economic Journal* dedicated to the contributions of James Meade argues that rather than being employed to work on

[10] The exact date of the plan is unknown, and while it appears between sheets from 1936 in the LSE Meade Archives, a response to the 'Plan' was received from Marschak on 1 Nov 1934, so I have dated it 1932-34. An earlier handwritten draft is also in the LSE Archives (LAM 2/4:19-22).
[11] This is particularly clear in Hicks's private response to Meade, and the ensuing private letter debate on this work by Meade (Hicks 1936, Jan 22; LAM 2/4:45-52).

Keynes's national income estimates, Meade in fact responded to Keynes's work while at the Treasury and invented the national income framework in the process:

> At the beginning of World War II Keynes set out the policy necessary to avoid excess demand in wartime, in his famous book *How to Pay for the War*. In response to this, James wrote a note in which he set out a double entry system for national accounts, published only in his collected papers. (Vines & Weale 2009: F424)

Vines and Weale (2009) are the only authors who cite archival sources as the basis for arguing that Meade invented GNP national accounting (cf. Comim 2001, Vanoli 2005). This note, published in Meade's collected papers, leads Vines and Weale to argue that Meade had formulated an independent response to Keynes. The London School of Economics archive, which hold Meade's documents, include a hand-written covering letter on the note in question (LAM 3/1: 1). This letter and note seems to have been missed in the collected papers. There Meade informs his correspondent that "This is the paper which I wrote in the Cabinet-Office in June-August 1940" (Meade 1972: 1).[12] The statistical tables had no resemblance to the entries for national income which Meade had looked for in the early 1930s (Meade 1932-4, 1972: appendix 2). Meade had not arrived at the Treasury and responded to Keynes's 1940 book: he was doing the job he had been hired to do, and he did it well. This note was written after Keynes joined the Treasury and by August 1940 Meade was sending Keynes datasets to which Keynes replied, including new and corrected data for Meade's on-going work (Keynes 1940, 20 Aug). Robinson hired Meade to work out a method for estimating the national income concept spelled out in Keynes's *How to Pay for the War* (1940) which is what he was doing.

Some forty years, and a Nobel Prize later, Meade recollected events slightly differently. He recalls that he simply "sat down, and wrote a schema" as it "suddenly occurred" to him to put things down on both sides of an account because "it was bound to add up. So I had national income and expenditure, savings and investment, the balance of payments, [and the] government budget" (Meade 1981: 1). This

[12] The letter is not dated, but is sent to R.C. Tress (another treasury economist) and it seems to have been his last copy of a past paper. The archive box dates suggest 1972-74, so I have used 1972.

balance was in Meade's own recollection a stark contrast to "Colin Clark's *Income and Outlay* [which] is a marvellous book, he was a man of genius, but it wasn't made to add up, or anything absurd like that" (1981: 1). Meade's criticism of Clark in the 1980s appears revisionist to me, as the idea of making the national account "add up" in the balances was only found in Keynes. In fact, Meade's own *Economic Survey* from 1939 did not add up in the balances either (League of Nations 1939).

Whether Meade had an independent epiphany in those summer months of 1940 or whether he was influenced by Rothbarth's and Keynes's *Economic Journal* article or by *How to Pay for the War* (1940) – the reason for Meade's employment – cannot be proven by reference to the written record. This is worth noting, as Keynes and Meade worked in close proximity to each other at the Treasury. It can be established that Meade deferred to Keynes on economic theory; Meade was well versed in the *General Theory* (1936) and in the national statistics of the time. Written correspondence between Keynes and Meade within the Treasury was only necessary when datasets had to be exchanged, and this started as early as August 1940. As the chief economist of the *World Economic Survey* Meade had not used a GNP structure (League of Nations 1938 and 1939), but within a few months of joining the Treasury, Meade started working with a concept of national income identical to that in Keynes (1940a, 1940b), which was exactly what he had been hired to do.

So Meade had worked with national-accounting-type data for years before joining the Treasury, building large nation-wide surveys with no relation to GNP accounts, and when he started at the Treasury, according to Stone, Meade was simply starting another survey, not a national account. Meade was re-assigned in 1942, and worked on labour and trade issues for the duration of the war. In all this work he defined national income in line with both Keynes's concept and theory, explicitly linking the effective demand to the national income figure and to the demand for labour.[13] Based on this, I argue, the theory of a GNP economy did not come from James Meade.

[13] In June 1942, Meade released a memo on the proposed reforms of social security, where he used the net national income and focused on the "total sum of taxable income", which had been Keynes's objective for the national accounts since 1939 (Meade 1942, 9 June: 29). Meade continued to use national income data, arguing that "Figures of national income and expenditure may thus be used in planning ahead for full employment. The first step is to estimate how great the total national income must be in order to provide full employment to the available labour" (Meade 1943, 22 Apr: 68).

2.2 And why Richard Stone did not invent GNP either

Richard Stone is usually portrayed as the empirical mind to Meade's theory: and "it was through Stone that this framework was operationalized" (Comim 2001: 217).[14] This sub-section argues that Stone was not responsible for introducing the idea of a GNP economy to the Treasury; rather, he had already adopted Colin Clark's concept of the economy in the 1930s, and Keynes convinced him to give it up. Stone was already a statistical force in 1939, and with his first wife he complained that "England is a backward country statistically" (Stone and Jenkins 1938: 1). Stone studied at Cambridge (1931-35) under Richard Kahn and Colin Clark and was part of Keynes's Political Economy study group, "but without doubt the greatest influence on me came from Colin Clark", with whom Stone became "great friends" (Stone and Pesaran 1991: 88).[15]

When Stone left Cambridge in 1935 he went to work at one of Lloyd's shipping underwriters, which he left in 1939 to pursue economics for the government. Colin Clark left for Australia in 1937, and Stone took over Clark's publication of *Trends*, a statistical feature in the monthly *Industry Illustrated* covering the major statistical developments in the UK. Stone was something of an expert in the field and had worked with the national income definitions and calculations made by Kuznets; he was aware of similar work at the Brookings Institution in the USA, as well as Tinbergen's work on national income in the Netherlands (Stone and Jenkins 1938: 3-4). Stone was not, as Vanoli (2005: 21-2) suggests, an amateur in the national income field. Clark acknowledged this when he hired Stone as the London economic correspondent for the Queensland Bureau of Industry (Clark 1938, 23 Sep).

Stone provided Clark with statistics and continued to assist him with his estimates of national income even after Clark left for Australia. This is clear in Clark's private letters to Stone where he wrote that "any improvement in my [Clark's] quarterly figures of real income will be very acceptable" as long as Stone followed the

[14] Meade recollects how in the national accounting structure "There wasn't a single figure! Austin [Robinson] said there is a terribly bright young man from Lloyds, who is really jolly good at this sort of thing. Let's get him along to do the figures. And so Dick Stone turned up" (Meade 1981: 1)
[15] Talking about the national accounting work Clark was doing in the mid 1930s Stone said that "I found all this fascinating and Colin [Clark] and I became great friends. I often had dinner and spent the evening with him in his pleasant rooms in a terrace in Peas Hill" (Stone and Pesaran 1991: 88).

"formulae given on pages 202-3 of *National Income and Outlay* [1937]" where Clark calculated his national income (Clark 1939, 24 May).

In 1938 Stone and Winifred Mary Jenkins gave a talk on "fundamental statistics" which for them "includes statistics of National Income and its distribution, consumption, saving and investment, employment and unemployment, production, the foreign trade balance, the exchanges, and so on" (Stone and Jenkins 1938: 1). Like Clark, they were trying to estimate the multipliers from Keynes's *Treatise* as "national prosperity and income will be affected either by a change in investment or a change in the national propensity to spend" (Stone and Jenkins 1938: 6).

So Stone was actively following Clark's definitions of national income as late as 1939, but a second influence on his thinking was beginning to show already in 1938. When Stone and Jenkins lamented the state of statistics, they saw hope in a new "theory of economics [which] has emerged to supplement and partially replace the classical static economic theory" (Stone and Jenkins 1938: 2). Of this theory, they said, "prominent men write to the *Times* about it almost every day" (Stone and Jenkins 1938: 11). It was for the *Times* that Keynes wrote on economics, and the treatment of past economic theory as 'classical' was a rhetorical device used very successfully in Keynes's *General Theory* (1936). When Stone joined the Treasury, Keynes became an even bigger part of young Richard Stone's life. Roy Harrod[16] recollects that "three or four times each week Mr. Stone visited Keynes, who took a meticulous interest in every detail" of his work (Harrod 1951: 503, cited in Tily 2009). When the 1941 White Paper was published, with Stone's name to it, the concept of national income was no longer based on page 202 of Clark's *National Income and Outlay* (1937).

Clark must have wondered why his student and great friend, Richard Stone, had changed his idea of an economy so far from Clark's own national income concept. So

[16] Sir Roy Harrod was an economist at Oxford University who became a close friend of Keynes and part of Keynes's circle of correspondence. In 1940 he joined the Statistics Staff at the Treasury, and became Churchill's advisor on economic issues. After the war he took over as editor of the *Economic Journal* together with Austin Robinson, and wrote the official biography of Keynes, on the request of Keynes's brother Geoffrey (Harrod 1951).

Clark wrote to Keynes in late 1941[17] at the Treasury to ask Keynes whether he had been part of the national income project and had convinced Stone to change his mind. Keynes replied to Clark that "you rightly surmise I had a great deal to do with the White Paper. The first part concerning the amount of overseas investment was mainly from my own hand. The second part, estimating and analysing the national income, was done by James Meade and Dick Stone" (Keynes 1942, 23 Jan: 1). Keynes was telling Clark that Meade and Stone were responsible for "Estimating and analysing" the data, but not setting out the definition of national income. This would not have been lost on Clark, whose conception of national income and the economy, which Stone had learnt and used until 1939, had been replaced explicitly in the White Paper by what Keynes had used in *How to Pay for the War* (1940) and his *Economic Journal* article (Keynes 1940b).

Richard Stone had started out at the Treasury with Clark's concept of the economy but had changed his opinion by the time the White Paper was published. When the collation and calculation of national accounts was transferred to the newly opened Central Statistical Office (CSO) on 27 January 1941 Richard Stone was put in charge of national accounts "at the instigation of Keynes, whose assistant I had become" (Stone 1984). As Clark's assistant at Cambridge in 1938, the then 25-year-old Stone had imbibed Clark's concept of the economy and worked to calculate the national income based on it. Two years later, as Keynes's "assistant" Stone did exactly the same job, but now using Keynes's definition of the economy. Stone remained at the CSO until 1946 and, "thanks again to Keynes' intervention, I continued to work on the national accounts, producing every year at budget time a White Paper with up-to-date figures" (Stone and Pesaran 1991: 92). From 1941 to 1946 Richard Stone continued to develop the national income concepts under the supervision of Keynes, and Stone would eventually become the greatest proselytiser of this concept, and measure, of the economy.

Like Meade, Stone had extensive experience with national statistics and in using national income estimates prior to joining the Treasury. Vanoli's (2005: 21-22)

[17] Which can be surmised from Keynes's (1942, 23 Jan.) reply to Clark where he replies to Clark on the concepts involved in the new national accounting system and congratulates Clark on his new-born.

suggestion that they were "audacious" and very fortunate beginners does not stand up to scrutiny. Like Meade, Stone had his own concept of what national income meant prior to joining the Treasury – although Stone's economy was adopted from Clark. Stone's concept of the economy changed during his first six months with Keynes, so when he and Meade sent their first draft of the national accounts to Keynes on 10 December 1940, it corresponded to Keynes's definition of the economy. That should by no means belittle the colossal empirical effort undertaken by Stone and Meade but, as Robinson had pointed out, accounting for economic growth by aggregating the public and private expenditure in 1941 was "the first fruits of Keynes' original idea and of their labours" (Robinson 1983: 129). It was *not* Meade's and Stone's idea but their effort in the job they had been hired to do. Based on this, it seems clear to me that Keynes, with Rothbarth, developed the idea of a GNP economy in the UK, and then Meade and Stone were hired in the Treasury to estimate this economy. Getting the Treasury to adopt this idea was an altogether different problem.

3. Keynes needs to convince the Treasury

Keynes had convinced Stone and Meade to change their idea of what national income was. Even with Stone and Meade convinced, it was not common practice for the Treasury to publish detailed accounts for the state of the nation. This section will argue that Keynes also convinced the Treasury first to publish the national accounts and then to continue this type of work. Without this effort, the project would never have become public knowledge, and Clark's economy might have survived. To illustrate the magnitude of such a change within the Treasury, consider one response to a draft national account which Keynes privately shared, illustrating what a drastic change such a publication would constitute.

> The Treasury has continued to present the national accounts in an archaic and unilluminating form... as elsewhere, the Treasury has shown an almost philistine distrust of anything involving valuation or estimation as distinct from ascertained facts, a distrust that contrasts sharply with the development of modern accountancy in the business world. These Treasury traits have been the despair of economic students and others who wish to understand the essential realities of our economic position. So many vital figures are withheld, so much uncertainty attaches to the interpretation of others, that it has almost seemed as though the Treasury preferred that public opinion should be ill-informed than it should be

> well-informed upon economic affairs. Suddenly there has come a startling change... Without any hint of sensational disclosure the White Paper gives information... of a type that has hitherto been jealously guarded. (Henderson 1941, 26 Mar)

The Treasury had until 1941 only published government cash-flow statements, so publishing detailed estimates of consumer expenditure, investments and government finances would be a U-turn in government policy. This was a sensitive topic given the war effort, but when Meade and Stone started their work in the Treasury "nobody was taking any notice. The frustration in the Central Economic Intelligence Service in the Summer of '40 was absolutely unbelievable" (Meade 1981: 2). To change Treasury methods a big effort was required at a high level. It came from Keynes, who was "in no position at all, but really running the whole of the Treasury and most of the rest of Whitehall" according to Meade (1981: 5). During the frustrating summer of 1940 nothing was circulated within the Treasury from Stone and Meade on national accounts. Stone recalled that when Meade and he had the first tentative empirical results in December 1940, they shared them with Keynes, who took an "immediate interest" in the results (Stone 1984). Now that he had empirical results, Keynes began his campaign to put his definition of the economy across as the official UK government definition.

On 3 January 1941 Keynes wrote to Francis Hemming, Director of the Economics Section, about Stone's and Meade's results because "I am satisfied that their final conclusions, as now reached, are about as good as are obtainable, and have indeed arrived at a remarkable degree of reliability" (Keynes 1941, 3 Jan). That is after Keynes had gone over both the results and the method with his two young colleagues. Keynes did not wait for Hemming to respond, but rather informed him that "I am circulating copies to a committee now sitting at the Treasury under Sir Horace Wilson, since the conclusions in question are likely to be of high interest" (Keynes 1941, 3 Jan). Keynes was keen to stress that the accounts should have a wider publication, possibly in the *Economic Journal*, as he thought "it would be valuable to many workers, not only outside government offices, but also inside them" (Keynes 1941, 3 Jan).

Hemming took a whole month to reply, and when he finally responded, he wrote that decisions to distribute or publish work on national income should only be taken once the Economic Section was separated from the Central Statistical Office (CSO) later that month. Seeing that he had taken so long to reply, Hemming speculated in his letter that the *Economic Journal* had probably overrun its print deadline for the next issue anyway, so the issue of publication was irrelevant for the moment (Hemming 1941, 24 Jan). Once the CSO had been separated from the Economics Division, Hemming thought Keynes should ask the CSO if the Treasury should publish the national income estimates, although "I think it not unlikely that the reply will be unfavourable" (Hemming 1941, 24 Jan). The expected director of the future CSO was Hemming himself, so this was tantamount to a decision by Hemming not to publish Keynes's national accounts.

Unperturbed, Keynes sidestepped Hemming and wrote to Sir Richard Hopkins, a close friend of Keynes and "the most senior official in charge of financial policy between 1927 and 1945" (Peden 2005: 11), speculating as to how one might disseminate the national accounts to a wider audience. Keynes suggested anonymous letters to the press, House of Commons addresses or Treasury Memoranda (Keynes 1941, 12 Feb). In January he wrote a memorandum intended for the House of Commons on "the Sources of War Financing", based on the national income estimates, and then took on full editorial responsibility for a possible White Paper including both this paper and the national income estimates. For this, Keynes met with Francis Hemming on Friday 7 March 1941 to request typed and printed copies of a potential White Paper. Three days later Hemming wrote Keynes,

> in accordance with your request at our meeting on Friday afternoon, I have had the Treasury memoranda on the sources of war finance and ours on the national income printed in the form of a DRAFT White Paper for presentation to Parliament by the Financial Undersecretary, if this is ultimately decided on… I shall take no further action until you give me instructions from the Treasury. (Hemming 1941, 10 March)

Having pacified Hemming, and expecting drafts of the White Paper, Keynes prepared a note for the undersecretary of finance, to be read in the House of Commons:

> To ask the chancellor of the Exchequer if he has made any estimate of the sources of War Finance and the current volume of National Savings and Income.
>
> Estimates have been made for my information in the Treasury and in the Central Statistical Office. Although those involve certain conjectural figures, I feel it so important for the House, in exercising its judgment on the problems of National Finance, to be in possession, especially with the Budget in near prospect, of the fullest information which can properly be made public in time of war, that I am circulating the details in a White Paper. The House when they see these details, will appreciate that I am taking an unconventional course which should not be regarded as a precedent; though I hope that we may be in a position, with the assistance of the newly established Central Statistical Office, to supply from time to time further statements on the same general lines (Keynes 1941, March).[18]

It is cunning, if classic, civil servant statement, where the responsible minister is asked to say that he had a set of estimates created for him. As Keynes's agenda was to disseminate the national accounts he wrote that the minister should inform the house that drafts were now being circulated. The statement does not appear to have been read in the House of Commons, but Keynes simultaneously approached the Chancellor personally and began editing the White Paper. The day after Keynes received the first version of the White Paper, Hemming sent Keynes another memo, headed "National Income" telling Keynes that he would be "making a note in our records that you have destroyed the uncorrected copies of the first edition which I sent you" (Hemming 1941, 11 Mar).[19] Hemming dutifully sent a new set of twelve copies the next day.

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[18] The document is undated and appears in the Treasury files among the early drafts of the White Paper. As it refers to the upcoming budget, it must have been written prior to the April 1941 budget announcement. Given that it refers to the 'unconventional' publication of national accounts, it seems to refer to the first national account (HM Treasury 1941), which is substantiated when he calls the CSO new. It is written after the CSO was founded on January 27 1941 and must have been written after the initial drafts of both the *National Accounts* and the *War Expenditure* – which together make up the 1941 White Paper; this places it after mid-February 1941. I have dated the document March 1941, as the chancellor only replies by the end of March, the circulation of the official drafts starts in mid-March and the first printed draft of the White Paper is finalised on 10 March 1941.

[19] Hemming also asked Keynes twice if Inland Revenue and the Ministry of Labour could be included in the circulation of the draft White Paper on the 7th, and again on the 10 March. Keynes seems to have resolved this favourably by the 11 March (Hemming 1941, 10 Mar; Hemming 1941, 11 Mar).

It was to Keynes that the successive edits of the White Paper were sent throughout March, until a sixth draft was arrived at (NAK T247/48). Keynes distributed this version for further comments towards the end of March, resulting in a rapid exchange of comments and corrections between himself, the Treasury, the Bank of England and economists around Whitehall.[20] On 31 March Keynes informed Hemming that the Chancellor of the Exchequer had recommended "that the material we have been working on" be published together with the budget (Keynes 1941, 31 Mar). Success.

The White Paper was finally published with the Budget on 7 April (HM Treasury 1941). It was a national account outlined along the now familiar C+I+G+(X-M) lines, which calculated the net national income and net national expenditure for 1938 and 1940.[21] Keynes even published a technical article in the *Economic Journal* by Meade and Stone (1941) on how to construct national accounts. So, after a long and arduous spring, where Keynes had pushed for the publication of the national accounts as a White Paper, he had finally succeeded. Without his efforts and promotion of the White Paper it is doubtful whether the national accounts would have been released.

3.1 Keynes's continued involvement in National Accounting

I have argued that Keynes both instigated and pushed for the publication of the national accounts which used his definition of the economy. I need to dispel any notion that Keynes did not participate in national accounting work from then on, which has been suggested by some sources (Meade 1981, Moggridge 1992). Only two weeks after the White Paper was published, a few days before Keynes left for America to negotiate the Lend-Lease agreements, he was already planning the next national account. He wrote a long Treasury memorandum headed "The following items will need careful watching when we next compile the White Paper" – focussing primarily on international flows and the financing of the war (Keynes 1941, 22 April). To Colin Clark, Keynes reported the following January that "We are hoping to

[20] The White Paper was commented on at length by the Bank of England (reply sent to Hopkins 29 March and passed on to Keynes), D.H.R. (23 March) [Dennis Holme Robertson], Sir H. Henderson on 26 March with remarks and a hypothetical response in the form of an article, Sir Richard Hopkins (1 April) who had sent the copy to the Bank of England, and on the 2 April the first proof is checked by Mr. Chadwick, with Keynes replying to Hopkins on the 3 April (NAK T247/48).

[21] Net national income (rents + profits and interest before tax + Salaries + Wages + Other Income) = net national expenditure (private expenditure at market prices + Gov't Expenditure + net investment at home and abroad - Indirect taxes + balance unaccounted for), 1938: £4.399bn; 1940: £5.598bn.

produce a new and important edition of the White Paper in connection with the next budget" (Keynes 1942, Jan 23: 2), with Stone spearheading the statistics from the newly formed Central Statistical Office.[22] The creation of the CSO meant that the (Marshallian) Census Bureau and other public bodies were no longer responsible for setting out the size and growth of the economy; this was all done within the Treasury and under the supervision of Keynes's 'assistant', Richard Stone.

Keynes maintained an active correspondence and close working relationship with Stone throughout Stone's tenure at the CSO. In May 1942 Keynes circulated "National Income and Expenditure after the War", consulting with Stone about his new figures for the national accounts and forecasting "national income at factor cost" into the post-war period (Keynes 1942, 29 May: 3). Stone sent Keynes more figures on the national income, calculating the taxable income "rather than the national income", and double checked all the calculations which Keynes had done on the projections (Stone 1942, 25 June: 2).

The third chapter of the 1943 Central Statistical Office publication on the "Influences affecting the level of national income" was entirely written by Keynes – despite the fact that Keynes was not in the CSO (Keynes 1943, June). Here Keynes discussed the accuracy of the CSO national income forecasts and gave possible ranges. After the memo was presented to the Chancellor, as an official CSO document, Keynes worried that a "deep intellectual confusion lies behind the conclusions on this subject which we have served up to the Chancellor this week" (Keynes 1943, 25 June: 1). He proceeded to re-estimate the CSO's and Stone's results from a different perspective "<u>within the limits of the physical resources</u>, it is the state of demand which will determine the national income", and so the national income figures were again changed, based on Keynes's direct action (Keynes 1943, 25 June: 2, his underlining). It is not important for this discussion what the exact technical changes were; the point

[22] Keynes explained that Meade was no longer working with Stone on the national accounts, "partly because Meade now spends most of his time with the Lord President's economists, but also because, poor lad, he has had a recurrence of his stomach ulcer" (Keynes 1942, 23 Jan). Meade would head up much of the work on employment policy and the employment White Paper, not returning to work on national account estimation. On 8 April 1941 Meade distributed a memorandum on government intervention in the post-war economy, focusing on four main objectives, the most important of which is a "Higher and more stable level of employment and of general trade activity" (Meade 1941, 8 Apr: 10). There was nothing about raising the national income.

is that Keynes was actively engaged with the measurement and further development of the national income, and the CSO's definition of the economy, throughout the war.

When in 1945 the Economic Section prepared a forecast of GNP for the post-war period (Meade 1945, 10 Oct),[23] a copy was immediately sent to Keynes, who was away at the inaugural meeting of the International Monetary Fund. The moment he returned, he replied to Meade:

> I am very glad on my return to find that this important piece of work has been carried so far to its conclusion. I was very much hoping something of this sort would be done, but not too optimistic about its being completed by now. It looks to me a fine piece of work. (Keynes 1946, 2 Jan)

Following this, Keynes launched into a barrage of memos to the Economic Section and the CSO about the exact form of the Net National Income estimates in these accounts and a set of criticisms as well as clarifications for the authors. After two weeks of debate, Meade submitted to "My dear Maynard" that "I am sorry that you should feel as you do about [the Net National Income calculation], as I had much hoped that this type of analysis would prove to be one which you would find merely a slightly more detailed exposition of the type of analysis which we all owe to you more than to any other individual" (Meade 1946, 18 Jan: 1, 8).

Despite Meade claiming to "owe" everything related to this type of analysis to Keynes in the 1940s, by the 1980s Meade suggests that "throughout his period at the Treasury (summer 1940 – Easter 1946) Keynes was preoccupied with external finance" (Meade 1982, 2 Mar: 2).[24] Moggridge (1992: 695) echoes Meade's sentiment, arguing that Keynes was too pre-occupied with foreign relations to deal with domestic issues such as national income estimation. Keynes may have been 'pre-occupied' but this did not stop him from becoming a director of the Bank of England, editing the *Economic Journal*, serving on the board of an insurance company, founding a theatre, founding and chairing the Arts Council or becoming a trustee of the National Gallery. Nor did it

[23] Signed at the back with "Offices of the Cabinet and Minister of Defence", but the LSE Archive index explicitly states the memorandum is written by Meade. This later became the *Economic Survey*, which became a regular publication (Meade 1947)

[24] This was noted in a peer review, written by Meade (1982, 2 Mar), of Booth (1983).

stop Keynes from earning £2,000,000 speculating in currencies from his bed every morning, so that "the day was now free for more important things, like economic theory" (Heilbroner 1972: 252). He was simply "a man incapable of doing only one thing at a time" (Heilbroner 1972: 272).

Keynes was involved with the national accounting estimates from the beginning. Despite any supposed 'pre-occupation' this involvement continued till his death in April 1946, shortly after he had corrected Meade's calculations. Keynes was instrumental in creating the underlying structure of GNP, estimating the empirical results and pushing for its use and publication both within government and without. He had supervised Meade's and Stone's empirical work during the autumn and winter of 1940. When the first estimates were completed in December, Keynes sent Stone and Meade a clarification on the uses and sources of savings in relation to the net national income (Keynes 1940, 10 Dec). Moggridge's claim of pre-occupation, supported by Meade's statements in the 1980s, is based on interviews and material collected long after Keynes's death. Keynes's own reports to the Treasury and almost incessant internal memo-writing indicate a serious interest in both domestic and even administrative Treasury affairs. As James Meade (1981: 8) brilliantly remarked in an interview, about his own recollections: "You mustn't believe more than every word of it, but it is the way I remember it and there is an element of truth to it", although "when you get old, your memory plays the most frightful tricks on you" (Meade 1981: 2). Perhaps, 40 years after the fact, Keynes's interest in domestic affairs is best measured by his written reports, memos and letters, not the memories of his junior colleagues and secondary sources.

4. The importance of Keynes's redefinition of the economy

This chapter has argued that the official British definition of the economy, published by the Treasury, was conceptualised by Keynes with the assistance of Rothbarth in 1938-39 and was further refined by Keynes in 1940. This definition of the economy was a definite break with Colin Clark's work. The publication of *How to Pay for the War* (1940), which re-iterated Keynes's definition of the economy, convinced Austin Robinson to initiate a project to estimate the national income along these lines at the Treasury. It was for this project that Robinson hired James Meade and Richard Stone, both well-versed in national income statistics and in Keynes's theoretical work. When

Keynes joined the Treasury, on the Chancellor's invitation, he supervised the national income project, providing Meade with a unified structure for the national accounts and convincing Stone to drop Colin Clark's concept of national income and the economy. As the national accounts took shape, Keynes spent the first four months of 1941 editing the White Paper and pushing the Treasury and Central Statistical Office to publish the GNP estimates as an official national account.

In this chapter, I do not mean to imply that Meade and Stone were not important parts of this story, as they completed a very complex task in computing the national income. Stone in particular was very influential in shaping the later definitions of national income and bringing the work forward to an international consensus as discussed in the next two chapters. But all of this was done with the theoretical structure and practical help of Keynes, and then only distributed as a result of Keynes's work within the Treasury. Keynes may have observed that, over the recent past, those who were successful in having their economy adopted as the official definition had been academics, like Marshall. Marshall managed to get the measurement done by his students and published by official bodies such as the Committee of Official Statistics (1920) or the Census Bureau (Tily 2008). Getting this type of buy-in from official bodies had been easy for Marshall, as Stamp, Bowley and Flux, who wrote the accounts between 1890 and 1920, were "Marshall's pupils; all three became Presidents of the Royal Statistical Society (RSS) and received knighthoods" (Tily 2009: 334). Indeed, ever since the establishment of the Census Bureau and the collection of national statistics in the mid-19th century, official measurement had to come from such government endorsed sources (Desrosières 1998). Spackman's 1847 national account was the first example of this; it had put Adam Smith's economy into the official statistics system. Marshall convinced that same office to change their definitions, but Keynes took a different route and went through a new statistical office, at the centre of policy making in the Treasury, where he put Richard Stone in charge. The Central Statistical Office, not the Marshallian Census Bureau, would be the office responsible for publishing national accounts and estimating the national income from then on. Keynes argued his theoretical point in the right academic journals and shifted the right administrative gears to displace Marshall's and Clark's economy.

According to Keynes and Rothbarth the economy was not just the private income earned by the population, as argued by Clark and the British administration prior to 1939. Instead it was the total effective demand from both the private and public sectors. Keynes's role in establishing the national accounts and conceptualising the economy as the total expenditure from both the private *and* public sectors meant that increased government expenditure substituted for private demand when calculating national income. So government expenditure, for the war effort, would be a positive contribution to economic growth regardless of the impact it had on private income.

Since Adam Smith academics had set the agenda for what defined the economy, and since the 1840s they had done so by having their followers back theories with official definitions and official statistics. Where Smith had convinced the Prime Minister directly, Keynes, like Marshall (Tily 2009), had to convince the government administration to adopt his ideas. Keynes did so by publishing his papers to a wide academic audience and convincing his own government assistants, before working through the administration to change the office procedures for publishing national accounts. Keynes is really the last example to date of such individual effort to define the economy, at least in the UK. He is also the last economist who single-handedly defined an economy, backed it up with empirical evidence, and attempted to influence policy making through his own definition of the economy.

Keynes continued to influence the definitions and estimates made by Stone at the CSO, but now the definition of the economy changed piecemeal. This debate took place almost exclusively within government offices, and with the need to manage international resources for the war effort, the British needed to convince the American government that GNP was the right way to define the economy. At the time, the US was actively measuring the economy, but they defined the economy along Marshallian lines, in which increased government expenditure was seen as having a negative impact on national income. Moreover, the British needed to convince the Americans that the UK national accounts were right and that the Americans should lend them money. This was problematic because when the US Secretary of the Treasury, Henry Morgenthau Jr., approached President Roosevelt about loans for the

British government, Roosevelt "waved him aside saying – 'never worry, The British will always find means of paying if they cannot get out of it" according to a classified Treasury report (HM Treasury 1941, 8 May: 1-2).[25]

The economy was redefined in Britain to serve war needs. The American economy would equally be redefined as a result of the war, and it was Keynes and Keynesians in the US who tried to change the US economy. As I argue in the next chapter, redefining the economy in the US required similar efforts, but *between* governments and through academic journals and international conferences.

[25] This is an overview report about Keynes's work in the US, dated 8 May and filed at the back of Keynes files from the Treasury (T247/113). As such the author is not named, and I am not certain how much of it is written by Keynes, especially as he is referred to in the third person on page 3, something rarely, if ever, done by Keynes in his own hand. Therefore I cite the author as HM Treasury.

Chapter 9

How British GNP conquered the USA, 1920 - 1950

> It is poverty of imagination and lack of drive that lie at the root of the inadequacies of our program. Neither the military nor the economic high command has shown during the past year an adequate grasp either of the dimension of the task or the urgency of the need which confronts us.
>
> -Richard V. Gilbert (1941, 2 May: 1)
> Advisor to President F.D. Roosevelt

This history of 'the economy' has so far been a story of individual nations where domestic circumstances led to new domestic definitions of the economy. Today there is a global consensus on what the economy is. This chapter relates the first part of that story, as it tries to show how GNP came to the US and displaced a dominant national definition of the economy. Moreover, I challenge the commonly held idea that Simon Kuznets and the Bureau of Economic Affairs[1] (BEA) somehow invented GNP. Instead I argue that a group of young BEA economists worked hard to take the ideas of Kuznets out of the national accounts and US definition of the economy, in order to redefine it in a Keynesian GNP mould. They did so to convince the politicians to invest in war capacity.

I will demonstrate that Kuznets, the BEA and the USA had an official non-GNP definition of the economy until 1941 and were convinced by a separate US government department, with the help of Keynes, to adopt the GNP economy in place of Kuznets's economy. I argue that Kuznets was not a supporter of GNP but its staunchest opponent. Similarly to Clark and Marshall, Kuznets defined the economy in private market terms only. With the Second World War approaching, one of the President's economic advisors, Richard Gilbert, began to push for increased government expenditure. But as policy makers were anchored to Kuznets's concept of the economy, they rejected the proposals to increase government expenditure as it

[1] I refer to the office that produces the national account by its current name, as it simplifies the exposition. Since its founding this particular department has been called "The Economic Research Division of the Bureau of Foreign and Domestic Commerce" (or BFDC for short). It was renamed to the "Office of Business Economics" (OBE) in 1947 and finally became the Bureau of Economic Analysis (BEA) in 1971, all within the US Department of Commerce.

would reduce private consumption and thereby reduce US national income. This chapter presents the official, non-GNP, view of the economy in 1930s USA and argues that it was only removed through a concerted effort from a very Keynesian government department.

1. Simon Kuznets and the US economy

In the USA Simon Kuznets is usually presented as the progenitor of GNP, particularly by BEA employees (Landefeld 2000, Marcuss and Kane 2007, BEA 2009, Landefeld et al. 2009). This argument derives from the work of BEA deputy director Carol Carson[2], which hints that Simon Kuznets's early national accounts had "evolved into a set of income and product accounts… by the mid-1940's" (Carson 1975: 153). Carson actually indicated that there was a conceptual break between Kuznets and the BEA in 1942 (Kendrick 1970, Carson 1975) but this thread of her argument was abandoned in the 1970s. In this section I show that Kuznets developed a model of the economy which dominated the BEA and United States policy thinking, contrary to a GNP economy. If Kuznets's work did not evolve into GNP, we can ask how GNP came to America. Knowing the answer to this question is the first step in understanding how we arrived at the situation today, where a British war-time definition of the economy has become a global consensus.

As a result of the great depression, the US Congress wanted to collect better data on economic activity. In June 1932 the US Senate passed a resolution which required the Secretary of Commerce to submit "estimates of the total national income of the United States for each of the calendar years 1929, 1930 and 1931… These estimates shall be prepared by the Bureau of Foreign and Domestic Commerce," which would later be renamed the BEA (US Senate 1932: 12,285). After testifying to Congress on the lack of data, the BEA's director resigned, so the BEA approached the National Bureau of Economic Research (NBER) to produce national income estimates (Marcuss and Kane 2007).

[2] Carol Carson was BEA director George Jaszi's primary researcher in the 1970s (Jaszi 1975, 11 Nov and Stone 1975, 18 Nov). She became deputy director of the BEA in the 1980s.

Kuznets had started his career at the NBER, and by 1932 he had taken over from Willford King, who was the primary author of national income estimates during the 1920s. The 1920s NBER definition of national income accounted for 'total book income' earned by companies, including the change in all asset values and 'realized income' of households, which included the benefit from household assets. Their focus was on the individual, and "although income has been classified by industries, the point of view is always that of the individual income recipient" (King 1930: 43). Government contributions to national income were limited to the government's direct payments to individuals through interest on treasury bills, public wages, and pensions – transfer payments - while explicitly excluding government payments to business and government capital investment (King 1930: 360-71). These were seen as intermediate expenditure, necessary for the private activity which defined the economy.

When in 1932 the BEA approached the NBER, Kuznets was seconded to the BEA and brought the ideas from King's national account with him. Having already "spent the two calendar years 1931 and 1932 deciding how the national income should be measured" Kuznets had a specific definition of the economy in mind, focussed on the 'net product' (Duncan and Shelton 1978: 78, cited in Kapuria-Foreman and McCann 2009: 7). There were two totals of national income: 'National Income Produced,' for which he added all the goods produced and services rendered by individuals *to* individuals, and deducted the value of assets and materials expended in the process of producing said output. This should then equal 'National Income Paid Out' which was money wages and payments in kind received by individuals, assuming business had no savings, although "this condition, however, rarely materializes" (Kuznets 1934a: 1). So there were two national incomes (Produced and Paid Out), which were not expected to equal as business savings made up the difference.

This was clear in Kuznets's *Encyclopaedia of The Social Sciences* article "national income" (1935: 205-224), where Kuznets wrote that "From [income produced] one can, by segregating savings of business units, measure income received by individuals" (Kuznets 1935: 207). Note the complete absence of a government sector, except as a payer of direct incomes to individuals.

Kuznets left the BEA after submitting his 1934 Senate Report, leaving Robert Nathan and Robert Martin – his assistants on the project – to continue working on national income estimates at the BEA. Nathan took charge of the project and published national accounts in 1935 and 1938 with the income-produced / income-paid economy (Nathan 1935, 1938, BEA 1985).[3] From 1938 onwards, the BEA published monthly updates of "national income produced" until Nathan's departure in 1941.

1.1 Welfare and National Income

Kuznets returned to the NBER after submitting his 1934 Senate report and continued his work on the definition and measurement of national income. He felt that the initial Senate Report was a good start, but "I would say that the further segregation of the total amount consumed by the nation's ultimate consumers is a highly important step; and to those who are interested in that segregation, income Paid Out represents only a first step towards the ultimate objective" (Kuznets 1937a: 39-40).

National Income Paid Out and National Income Produced remained the core of Kuznets's economy; they were the starting point for estimating the total goods and services consumed by the population, excluding all public expenditure. It is worth quoting Kuznets at length to appreciate the ambition of his concept:

> It would be of great value to have national income estimates that would remove from the total the elements which, from the standpoint of a more enlightened social philosophy than that of an acquisitive society represent dis-service rather than service. Such estimates would subtract from the present national income [Paid Out] totals all expenses on armament, most of the outlays on advertising, a great many of the expenses involved in financial and speculative activities, and what is perhaps most important, the outlays that have been made necessary in order to overcome difficulties that are, properly speaking, costs implicit in our economic civilization. All the gigantic outlays in our urban civilization, subways, expensive housing, etc., which in our usual estimates we include at the value of

[3] Marcuss and Kane (2007: 35) note that Nathan (1938) and BEA (1939) "raised the prominence of national income produced, eventually featuring it and referring to it simply as national income" as it was the largest of the two results. This was probably not based on the BEA's or Nathan's insistence, but rather Kuznets's 1937 suggestion that there was "no basis for declaring income produced a concept inferior in analytical status to that of income Paid Out" rather "National income produced, being the most inclusive national income total and measuring, as it does, the net product of the economic system, is from the standpoint of economic analysis, the basic concept" (Kuznets 1937a: 38).

> the net product they yield on the market, do not really represent net services to the individuals comprising the nation but are, from their viewpoint, an evil necessary in order to be able to make a living (i.e., they are largely business expenses rather than living expenses). Obviously the removal of such items from national income estimates, difficult as it would be, would make national income totals much better gauges of the volume of services produced, for comparison among years and among nations. (Kuznets 1937: 37)

Business expenses were an "evil necessary" not directly contributing to private consumption and not important for considering economic growth. Similarly, government expenditure that did not add directly to net consumption should be excluded from national income as they did "not really represent net services to the individuals comprising the nation." Kuznets, the NBER, the BEA and the USA had a definition of the economy and economic growth which was very different from GNP where government expenditure is considered final consumption. Kuznets struggled with what parts of government spending contributed directly to consumers, but defined the government as an intermediary cost "implicit in our economic civilization." His focus on net consumable output was clear throughout his writing, especially his influential *Encyclopaedia of Social Sciences* article "National Income", which defined national income as the "net total of desirable events enjoyed" by the people (1935: 205).

Government expenditure, on items such as armaments, would divert production away from consumer goods and services thereby reducing national income. If the private consumable output in the economy fell, that meant economic activity had fallen. This issue was of great nuisance to parts of the US administration who advocated increased government expenditure in the build-up to World War II. The Office of Price Administration and Civilian Supply (OPACS) found its recommendation to increase government expenditure in 1940 and 1941 rejected by the administration, on the grounds that it would impact the economy negatively. Economic growth, in Kuznets's economy, was defined as the change, year on year, in the total private consumable output of goods and services, not the private and public expenditure. OPACS were reduced to arguing that "with regard to the objective of expansion, this too is served by the increase of expenditure" because they had shown that "total expenditures now

run far beyond the levels of the 30's" (Gilbert 1941, 14 Jan: 7). OPACS director Richard Gilbert (1941, 14 Jan: 7) was frustrated as "this experience should have put an end to all doubts as to the stimulating effects of an increase in government expenditure. But it has not done so."

For Kuznets, the government was an intermediary cost in the economy – similar to what Colin Clark (1932, 1937) had suggested in the UK – and should be treated as a (neutral) transfer payment – which were included for pension payments to private individuals – or as an intermediate cost when calculating national output. The government's output and expenditure could only count towards national income, and economic growth, if it contributed directly to net private consumption, but that would be a transfer payment. Government capital formation, expenditure on goods for government use, or expenditure on business were simply intermediary costs for the final consumer, who had to incur these expenses as "an evil necessary in order to be able to make a living" (Kuznets 1937: 37). Private consumption from private industry defined Kuznets's economy.

1.2 Kuznets's 1941 National Account

As the British government published its 1941 national accounts (HM Treasury 1941), Simon Kuznets published his 1003-page-long opus, *National Income and its Composition 1919-1938.* He remained true to the 1935 *Encyclopaedia* article, as "we aim to ascertain, as accurately as we can, the contribution of economic activities to the consumption of the inhabitants of the country and to their stock of capital goods" (Kuznets 1941: 11). The stock of wealth, in terms of private capital formation, was calculated based on Kuznets's own method and indicated the ability of private industry to reproduce the national income year on year (Kuznets 1934b). The national income itself was the "net product of economic activity of production processes broadly conceived" (Kuznets 1941: 13).

The argument to exclude non-consumption items was expanded to exclude those activities of an illegal or unethical nature as "expressed overtly by the body social" (Kuznets 1941: 18). Activities which did not add to welfare, such as cigarette consumption, should be removed from the consumption figures and from national

income, even if data were available (Kuznets 1941: 18).[4] Then national income was disaggregated into four results: the now standard national income produced was complemented with national income paid out, national income spent, and national income consumed, where "national income may be used as a generic term to designate all or any of the four totals" (Kuznets 1941: 47).

Kuznets argued that the smallest of these four would generally be the utility gained by the final consumer who acquired goods and services (national income consumed). This value would be based on a combination of the goods and services that consumers purchased (national income spent), and the goods and earnings used by companies to reimburse employees in a given time period (national income paid out). The largest of the four would usually be the net value of all goods and services produced (national income produced), of which most would be consumed but some would be 'wasted' by government.

Contrary to GNP, which balances expenditure, output and income, we here have four accounts that do not equal, and "for any given period the total of such expenditures on the purchase of finished goods is not necessarily equal to the payments received from the producing establishments or to the value of products actually consumed by ultimate consumers" (Kuznets 1941: 46). Private sector production was the main variable of concern, as in Nathan (1938) and BEA (1939), but production was defined in terms of consumer goods and services, not the aggregate output from the private and public sectors.

> We may describe national income as the net value of goods produced, or as total payments by producing enterprises to individuals largely in return for the productive services of the latter or of their property, or as total outlay by ultimate consumers on finished goods, or as the total value of goods consumed by the nation's ultimate consumers. For any reasonably short period, no two of the four totals will be the same; and between some pairs of totals the differences are substantial for any period. While the choice is largely terminological, the way in

[4] This could not be fully implemented in the final account. Kuznets's concern was the socially desirable output, and he tried to calculate this by deducting illegal and unethical consumption from the national income account but found that "such a solution is far beyond the scope of our investigation. With the data and time we had" (Kuznets 1941: 19).

> which national income is defined affects the total and its variability over time. (Kuznets 1941: 47)

The concept of national income which Kuznets worked with from 1932 to 1941 was by no means a plan to re-conceptualise the national income produced and paid out as the aggregate of consumption, investment, net exports and government expenditure. Rather, it was an extension of the 1930s *official* American system of national accounts, counting only the final private consumption of privately produced goods and services as economic activity.

1.3 The influence of Kuznets's ideas

Kuznets had a definition of the economy which was far from GNP, and I need to establish that it was the dominant idea in the USA. If it was dominant, then the BEA's work after 1941, and their publication of a GNP national account in 1942, can be seen as opposition to Kuznets, not the continuation of his ideas. Indeed, it is hard to overestimate the impact Kuznets had on the conceptualisation and measurement of the economy in the USA (Kuznets 1934: 5). When the later director of the BEA, George Jaszi, joined the Bureau as an economist in 1941, he saw his initial contribution as the fact that "I resisted the will-o'-the-wisp of forging national output into a measure of economic welfare, which required an independent point of view. I was a minority of one in a company that included such mental giants as the late Professor Kuznets and Professor Hicks. Before long I had to defy a forceful secretary of Commerce[5] who had 'instructed' BEA to prepare a measure of welfare" (Jaszi 1985: 4).

Jaszi was not alone for long. In 1941 Kuznets's assistant Robert Nathan retired from being the director of the National Income Division at the BEA and was replaced by another young BEA economist, Milton Gilbert.[6] It was Milton Gilbert and Robert B. Bangs (1942a) who composed the "GNP series [which] was effectively launched in May, 1942" (Carson 1975: 172) based on a set of initial estimates by Milton Gilbert (1942). This series has since become known as the 'first' GNP account in the USA

[5] Presumably Jesse H. Jones, Secretary of Commerce: September 19, 1940 – March 1, 1945.
[6] Milton Gilbert directed national income measurement at the BEA (then BFDC) from 1941 to 1949, moving on to become the head of national accounts at the Organization for European Economic Cooperation (OEEC, later OECD) from 1950 to 1961.

(Landefeld et al. 2009). But Gilbert had *already* co-published a national income estimate in 1941 when he was an economist at the BEA (Gilbert and Yntema 1941). There he had calculated the national income produced, just as Kuznets did in 1933, 1934, 1937 and 1941, and Nathan did in 1935 and 1938. Gilbert commented only loosely on consumption in 1941, and he included private capital formation in national income, and made no mention of welfare, preferring to discuss the impact armament production had on national income (Gilbert and Yntema 1941). When Carson interviewed Milton Gilbert in 1969 he said that his intentions at the time were to move away from Kuznets's ideas and that "when he [Gilbert] became chief of the National Income Division he sought to work out a national income system that would explain the current business situation in Keynesian terms. He sought to bring demand components into national income estimating" (Carson 1975: 167). To do so, Gilbert "brought into the division half a dozen new professionals" untouched by Kuznets (Carson 1975: 167). Milton Gilbert, together with Charles F Schwartz, Edward Denison, Robert B. Bangs, Dwight Yntema and George Jaszi then set out to contradict Kuznets's definition of a consumption-welfare economy.

This team of young BEA economists had one big problem: They had no alternative theory of the economy. As late as 1941 Gilbert and Yntema (1941: 13) explicitly stated that the "income actually disbursed by enterprises plus business savings equals the national income" – Kuznets's national income produced. Despite a new team and new intentions, Kuznets's influence remained strong within the BEA, but Gilbert was intent on moving towards a more "Keynesian" concept of the economy suited for war preparations. When he presented the first official estimate of GNP in March 1942, Gilbert emphasised that "It may prove of assistance to some readers to discuss briefly one of the sources of confusion concerning the impact of the war program upon the economic structure; namely, that which has arisen from inappropriate comparisons of war expenditures and national income" (Gilbert 1942: 9).

1.4 The BEA breaks away from Kuznets

Milton Gilbert and Robert Bangs (1942a) estimated gross national product and framed it as having a wider scope that Kuznets's national income produced, adding that "in the case of government, the total payments to factors of production is included as the measure of the value of government output" (Gilbert and Bangs 1942a: 10). While

this is similar to Kuznets's treatment of government as a wage payer to private individuals, Gilbert was keen to point out that this was not a question of simply grossing Kuznets's net figures, meaning some intermediary costs would be included. Rather, in a paper presented to the American Statistical Association in December 1941, Gilbert emphasised that:

> This figure, which amounted to nearly 120 billion in 1941, has been labelled,[7] somewhat hesitantly, "gross national product at market prices," in the hope that the last three words will clearly distinguish it from Professor Kuznets' gross national product concept. It is certainly a grosser 'gross national product' than that which has become familiar through his work. (Gilbert, M. 1942b: 193)

Kuznets preferred the 'national–income-produced' terminology and used net figures but, in formulating his argument, Gilbert made it a point to connect Kuznets to his own extension. The new concept was "grosser" (Gilbert, M. 1942b: 193) than Kuznets's gross figures, as it included government expenditure funded by business taxes as part of the economy, and this was "one of the important respects in which it differs from the concept made familiar by the notable work of Professor Kuznets" (Gilbert and Bangs 1942: 10, footnote 5). Kuznets had treated government expenditure as an intermediate output, and excluded it from the national income. Gilbert included parts of the total government expenditure in his estimate of national income as his definition of the economy was different. When Marcuss and Kane (2007) praised the ground breaking work of the BEA in 1942 and indicated its roots in Kuznets, they had only one point of criticism: In the 1942 national account and the accounts for 1943 and 1944 (Gilbert and Bangs 1942b, Gilbert and Jaszi 1943, Jaszi 1943, Gilbert and Jaszi 1944) the total "projected defense expenditures were sometimes *erroneously* subtracted from the projected national income" (Marcuss and Kane 2007: 39). In the eyes of Marcuss and Kane, who worked at the BEA in 2007, this exclusion is an obvious error when calculating modern GNP, a view shared by the British national accountants in 1942 (Stone 1942-3). For Kuznets it was logical and established practice to deduct government spending on war, as war materiel would not add to individual consumption. The BEA did not forget to include defense; they had

[7] Oddly Golbert uses the British spelling for 'labelled' in the original, despite being published in the *Journal of the American Statistical Association*..

to balance Kuznets's influence while getting as much of the government into the economy. So the young BEA economists sought a compromise with their new concept of the economy:

> The process of converting national income to gross national product, therefore, was essentially one of increasing the size of the national product concept to make it fit the concept implicit in the war expenditures… It should be emphasised that this way of handling the problem is not a mere difference in methodology; the results achieved can serve different purposes. Specifically, if the objective is an estimate of the real resources in terms of factor costs being devoted to the war effort as against those being utilized for civilian purposes. (Gilbert 1942b: 197)

Gilbert is "increasing the size of the national product *concept*" (my emphasis) and redefining the economy piecemeal to make the changes politically acceptable. Rather than come up with a new definition, he is changing the system within the BEA, to redefine the economy. Like Keynes (1940), the BEA sought to estimate the funds available for the war and tried to break with Kuznets's definition of national income to do so.

The only item carried over from Kuznets's national account to Gilbert's 1942 GNP account is the only 'error' in the early GNP accounts, according to the economists who claim Kuznets as the progenitor of GNP (Marcuss and Kane 2007, Landefeld et al. 2009). Kuznets and GNP simply did not mix. As Carson put it, "from this point on the differences between the Kuznets and Commerce Department [later BEA] viewpoints widened" (1975: 170, footnote 57). The idea of a gradual evolution from Kuznets to GNP does not work because the idea of treating the government as a direct contributor to the economy was diametrically opposed to Kuznets's idea of the economy. The young BEA economists succeeded in replacing Kuznets's welfare approach "mainly [through] perseverance, craftsmanship, including a sense of the beauty of the system, and the ability to listen responsively" to each other, while fighting Kuznets together (Jaszi 1985: 4). The new 1942 GNP estimates were *conceptually different* in their definition of the economy, a point Gilbert laboured (1942b). This conceptual difference between BEA's GNP and Kuznets's definition was, according to Gilbert, "implicit in the tables on net national income and net

national expenditure contained in the British White Paper on the "Sources of War Finance" (Gilbert 1942b: 197). The Keynesian terms Gilbert had sought to implement were adopted from the British, that is Keynes's, definition of the economy.

My argument that Kuznets did not invent GNP is not new; it has simply been ignored. I speculate this is because it contradicts the official BEA history of a smooth 'evolution' from Kuznets to GNP. Historians Duncan and Shelton (1978: 77) have pointed out that Kuznets's concept of the economy provided "the theoretical foundation for the official national income estimates of the 1930s" while the post-1942 accounts were built around GNP. Kendrick (1970) and Carson (1975) suggested that the BEA broke with Kuznets in 1942 and that Kuznets's students, and students' students, still emphasise how his concept and measure of economic growth differs fundamentally from GNP (Kapuria-Foreman and Perlman 1995, Perlman[8] 1996, Perlman and McCann 1998 (ch. 5), Kapuria-Foreman and McCann 2009). Indeed, as one of his students wrote to me, "Kuznets never did change his stripes. When I took his course at Harvard (very boring lectures so I had to stay awake by keeping copious notes) he was still looking at national accounts as a welfare measure and saying that government services should be an intermediate good".[9] None of the literature has looked at the national accounts by the BEA and the work of Kuznets together for the period, and I hope to have shown that there could not have been an evolution from Kuznets to GNP.

Milton Gilbert had started to modify Kuznets's economy, and if we consider the long history of national accountants measuring the economy, what he was doing was a new thing. He was very careful to appear to be developing further an already existing concept of the economy rather than advocating a wholesale redefinition of the economy, even if that was his ultimate aim. Redefining the economy by reworking the national accounts, rather than proposing a new theory as Keynes or Marshall had done, would become more important as international cooperation began to shape our

[8] I use the term 'student' not as in studying under, but as someone studying Kuznets. Perlman was not technically a student of Kuznets. Although "The happiest academic years of his [Perlman's] life were those which overlapped with Fritz Machlup and Simon Kuznets who became his complementary mentors" (Lim et al. 2001: 3), also "Mark [Perlman] regarded Kuznets as the greatest economist of the 20th century" (Lim et al. 2001: 12, footnote 4)

[9] Private correspondence with Lance Taylor, 27 January 2011.

definition of the economy, and, as I argue below, it was international pressure and collaboration which led Gilbert to adopt GNP.

2. Keynes and the American alternatives to Kuznets

This section argues that the BEA adopted their new concept of the economy from a different government branch, which had been busily estimating the national income in Keynesian terms since 1940. This provides some perspective on how the definition of the economy was now being transferred through government departments on an international scale, much as it occurs today where the UN is an official arbiter. In fact, several branches of the US administration had their own concepts of national income, but only one of these branches was visited and assisted by Keynes while he was in the US

To Keynes, the different US government departments lacked a clear hierarchy, on top of which there was intense inter-departmental competition where "one can never remember, I find, in this place to make enough allowance for the extreme jealousy between colleagues" (1941, 25 May: 3), on top of which "there never was a slower country than this in which to do business" (1941, 30 June). Such divisions were also evident in the several branches of the US government who were defining the economy on their own.

Sweezy (1972) and Vanoli (2005) mention that Laughlin Currie at the Federal Reserve had estimated "the net contribution of the federal government to national buying power" (Vanoli 2005: 22) for what he called 'pump priming' or the relationship between aggregate demand, as outlined in Keynes's *General Theory* (1936) and government expenditure. What neither of them noted, but Patinkin (1983: 538) and Carson (1971) did, was that the Federal Reserve had already re-published the British GNP White Paper in its July 1941 issue of the *Federal Reserve Bulletin*. The Bureau of Labour Statistics (BLS), under the direction of Wassily Leontief, to whom Vanoli (2005: 23) dedicates a sub-section, had their own model of the economy wherein all industrial sectors produced goods or services that were consumed fully by

another sector (Leontief 1937).[10] Leontief's concept of the economy encompassed "all branches of industry, agriculture, and transportation [and] also the individual budgets of all private persons" (Leontief 1951: 11), measuring the total industrial output and input as aggregate economic activity. The National Bureau of Economic Research (NBER) and Kuznets were estimating consumption and welfare as national income, while the Bureau of Economic Affairs (BEA) estimated Kuznets's National Income Produced and Paid Out when Keynes visited in 1941. While all the departments wanted their definition to be favoured, the dominant player was the statistical bureau responsible for publishing official statistics on the economy, the BEA. To redefine the economy one either had to take that statistical function away (as Keynes had done to the Census Bureau in the UK) or convince the BEA to redefine the economy.

Unnoticed by the literature so far is the Office of Price Administration and Civilian Supply (OPACS), who were responsible for mobilizing American resources for the war. To do so, they needed an estimate encompassing private consumption, private and public investment as well as government expenditure, and it was with them that Keynes met next.

2.1 The Office for Price Administration and Civilian Supply

Donald Moggridge, who edited the *Collected Writings* of Keynes (*CW*),[11] included a selection of the correspondence between Keynes and the OPACS economists as "some of his exchanges and comments on the subject of the American mobilisation of resources are of more general interest" (Moggridge 1979: 181). What interests Moggridge is a debate on the quantitative basis for worrying about inflation in the US following "a gathering of youngish economists in the house of Laughlin Currie" where Keynes was invited for dinner (Keynes 1941, 23 May, *CW 23*: 181). Unfortunately Moggridge did not include the tables and various quantitative appendices exchanged in the course of the ensuing debate, presumably judging that they were not of general interest, which is a shame. Had he done so, he would have found, in the documents left for Keynes after a meeting in his hotel room, a set of

[10] Leontief (1937) contains a snippet of the US account with 44 sectors estimated for 1919 and 1929. Some of the sources for this work were later given in the appendices of Leontief (1951).
[11] See bibliographic notes for references to the Collected Writings (*CW*)

OPACS calculations detailing the "Components of Gross National Product" dated the 17 June 1941 (OPACS 1941, 17 June), pre-dating all the BEA GNP work.

After Keynes's second meeting with OPACS on 10 June 1941,[12] one of Keynes's old students and now OPACS economist, Walter S. Salant,[13] wrote to him that OPACS's national income estimates were taking shape and "we are assembling this material and are most eager to have you consider it" (Salant 1941, 12 Jun. *CW* 23: 186). A series of meetings was arranged and correspondence exchanged on how to set up an American GNP account.[14] On 17 June OPACS sent Keynes its first draft of a GNP national account, reproduced in *Table* 9.1:

[12] Keynes "attended a meeting with a group of economists at the National Press Club" with OPACS director and economists, at which Salant took notes (Moggridge 1979: 182).
[13] Salant had his economics degree from Harvard and "spent two years at Cambridge University, 1933-34, where he was a research student in the Keynes seminar" (Kindleberger 1999, 7 May). Salant returned to Harvard teaching the ideas from the *General Theory* before its publication. He was appointed to the National Council of Economic Advisers, Executive Office of the President, 1946-52.
[14] Letters and detailed notes are exchanged in 1941: (i) 9 July, Keynes to Salant in response to the June 17 document, *Components of GDP* (Letter in *CW* 23*:* 187; the GNP account is available in the National Archives, London, UK: File Reference: T247/107: Miscellaneous on USA). (ii) 15 July, Salant to Keynes (*CW* 23: 188, three attached tables [National Archives, T247/107] and 12 page report on GNP method [Salant 1941, 1 July]). (iii) 24 July, Keynes to Salant (*CW* 23: 189, National Archives, T247/108). (iv) 27 July, Keynes to Salant as Keynes is leaving the USA (*CW* 23: 193). Meetings were held with OPACS staff on 22 May (the dinner at Currie's), 10 June (at the Press Club), 21 June (Salant, Humphreys and Gilbert visit Keynes), End of July, meeting with the Director of OPACS, Richard Gilbert; "Since writing the above I have had further discussions with Gilbert" (Keynes 1941, 24 July, *CW* 23: 190).

Table 9.1: OPACS draft table of GNP, 17 June 1941

June 17, 1941

COMPONENTS OF CHANGE IN GROSS NATIONAL PRODUCT
BETWEEN FISCAL YEARS 1940 AND 1942

(Billions of Dollars)

	+	-	Net
A. War materials, incl. lease-lend	13.9		+13.9
B. Civilian Gross Investment:			
Inventory accumulation		0.6	
Foreign Balance excl. lease-lend		1.2	
Public Works		0.9	
Plant	1.5		
Equipment	2.5		
Residential Construction	1.2		
Total Civilian Investment			+2.5
C. Consumption:			
Durable	1.2		
Non-durable	9.4		
Total Consumption			+10.6
Total Gross National Product	29.7	2.7	+27.0
Deduct capital consumption	2.6		+2.6
Total National Income	27.1	2.7	+24.4

Source: OPACS (1941, 17 June: Table 1)

OPACS used the BEA's figures for national income produced as a starting point (Salant 1941, 15 July: table 2) and adjusted them by adding government investment and federal expenditure, in particular on war investment. They estimated that the GNP was $24.4bn more than the estimates of national income being used by the BEA. So to OPACS the economy was considerably larger when treating the government as more than an intermediate cost of consumption. Using a set of assumptions they then projected their figures into the next fiscal year to estimate the total output and the resources available for the war effort. Keynes, true to form, immediately got involved in the empirical issues, as he had done with the White Paper in Britain, exploring the assumptions of the forecasts and agreeing with the theoretical structure. On his departure from the USA, Keynes wrote Salant an encouraging note:

> Farewell greetings to yourself, Gilbert and Humphrey. I have greatly enjoyed our discussions. Do not think because I have been in a critical mood that I do not appreciate the value and significance of the work you are all doing; I sympathise with it infinitely more than I criticise. But it is when I come across stuff which is

> on fruitful lines that I feel most critical, if only for the reason that it is worth criticising. (Keynes 1941, 27 July; *CW* 23: 193)

Keynes encouraged OPACS to continue their "fruitful" work on GNP and to persist in its implementation, and left this very Keynesian office behind to continue its work. To call it a Keynesian office is no understatement, especially considering John Maurice Clark's[15] letter to Keynes, where he warned Keynes that around his notion of the economy "a 'school' has grown up" in the USA "of which I think the Gilbert-Humphrey attitude is one illustration" (Clark, J.M. 1941, 24 July; *CW* 23: 191). Keynes replied that a number of the ideas from *How to Pay for the War* (1940), where the GNP method appeared, was "now common ground amongst many economists" although "I agree with what you say about the danger of a 'school', even when it is one's own" (Keynes 1941, 26 July; *CW* 23: 192). Although Keynes had been critical of OPACS's work he was "very sorry to have differed from them in opinion, because I have a high appreciation of their gifts and of the work they are doing" as "Gilbert, Humphrey and Salant… [are] so much on the right side of things and thinking so well and clearly that one need not be afraid perhaps of criticising them" (Keynes 1941, 26 July; *CW* 23: 192). In particular, the director of OPACS impressed Keynes, who added that "I like Gilbert's persistence and indomitableness" (Keynes 1941, 26 July; *CW* 23: 192).

2.2 Why Gilbert is significant, and why it was not Milton

Moggridge (1979: 182) identified the Dr. Gilbert who met Keynes in 1941 as Milton Gilbert, the heir apparent of GNP accounting at the BEA. This is one of the few mistakes in Moggridge's otherwise seminal collection, as pointed out by Salant himself (1980). Milton Gilbert was the editor of the BEA's *Survey of Current Business* and an economist with the BEA in 1941. While he would soon become head of research in the BEA's national income division, he was not the director of a whole government department. It was a very different Gilbert who Keynes met. That Gilbert was Richard V. Gilbert, Milton's older cousin and "a brilliant economist who is little known because he has written almost nothing for publication" (Salant 1980: 1062).

[15] John Maurice Clark was an American economist based at Columbia University in New York. The son of John Bates Clark, he was an eminent economist in his own right and served as the President of the American Economic Association in 1935. See Hickman (1975) for J.M. Clark's biography.

Perhaps appropriately, the only (semi-)biographical work on him was entitled "The Invisible Advocate: Richard V. Gilbert" by his own son-in-law, historian Hugh J. Schwartzberg (1984). This sub-section aims to illustrate the importance of Richard Gilbert, both to the administration and in bringing GNP to the USA.

Richard Gilbert was hired by Harry Hopkins, President Roosevelt's 'strong man' on economic issues, as an economic advisor in 1939 and remained in government through the war. Hopkins (justifiably) felt that Richard Gilbert was the mastermind behind the influential *An Economic Program for American Democracy* (1938) and wanted him to leave Harvard – where he had taught from 1924 to 1939 – for the government. Richard Gilbert was one of many Harvard economics professors to join the administration, and he had a decidedly Keynesian outlook.[16] Described as "an economist's economist" (Neal 1943, 16 Jan: 1) and a celebrated academic in his own right,[17] Gilbert began by writing speeches for Hopkins and advising Hopkins on economic policy, who in turn outlined policy for the President. Gilbert soon found a faster way to generate policy directly, by simply talking to Hopkins and writing policy memoranda which he attached to speeches for the President and sent straight to the White House Chief of Staff for the President to read (Schwartzberg 1984: 8). As the ageing Hopkins spent extended periods in hospital, Gilbert became increasingly responsible for economic policy advice to the President.

One episode in particular illustrated this. During one of Hopkins's periods of illness, Richard Gilbert decided that the Works Progress Administration (WPA), which disbursed public funds under Roosevelt's New Deal, needed substantially more funding. Rather than disturb Hopkins at the hospital Richard Gilbert wrote a short

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[16] When the *General Theory* was re-printed in the US, Galbraith wrote a lead article in the *Sunday New York Times Book Review* entitled "How the Revolution came to America." He argued that Keynes had been unable to convince President Roosevelt in 1933 with his open letter, and it was in fact a set of economists who had travelled to Washington at the start of the war which were responsible for the move towards Keynesianism. On the list of those economists, Richard V. Gilbert sat at the top, with a note about Gilbert's 'peculiar' relationship with Harry Hopkins added. Galbraith also pointed to Alvin Hansen's efforts in academia, of which the Keynesian reading group at Harvard was very important. Gilbert was part of organising this reading group (Schwartzberg 1984: 5-6).

[17] Galbraith recollected "there was none like Richard Gilbert. We all accepted that he was more than a colleague, though of our age and academic rank. He was also our mentor. When Dick spoke, we listened, and in the end, agreed" (Galbraith, cited in Schwartzberg 1984: 4). Galbraith also worked as an assistant administrator in the Office for Emergency Management, under Gilbert in OPACS. (See Henderson, Hamm and Galbraith 1941, 1 Nov.)

note with his argument to a list of other government departments, "and when Laughlin Currie delivered Richard's message to Marriner Eccles at the Federal Reserve Board, Eccles called a meeting" which included the Secretary of Agriculture and other top-level policy makers (Schwartzberg 1984: 6). Gilbert attended this high profile meeting but "the crucial question was whether Gilbert was speaking for himself, or for Hopkins – and therefore for FDR." (Schwartzberg 1984: 6) If the latter was the case, the decision to increase WPA funding was effectively policy, but if the former was the case, then Gilbert's note could be debated. Eccles was so disturbed by the large increase in WPA funding that he stopped the meeting to call Hopkins "and insisted on reaching Hopkins in his hospital bed. Eccles told Hopkins what 'your man here' was doing. There was a pause while Hopkins responded to Eccles, during which Richard stood petrified. But Hopkins agreed. The legend is that Hopkins's actual words were: 'If my man Gilbert says it, it's policy.' Gilbert claims that this *dictum* is apocryphal, but admits the rest" (Schwartzberg 1984: 6).

It was not Milton Gilbert of the BEA, but Richard Gilbert from the Office of Price Administration and Civilian supply (OPACS) who, on the 10 June 1941, led the talks about GNP accounting with Keynes, in Keynes's hotel suite at the Mayflower Hotel. The two agreed on the structure of the national accounts, although not on the appropriate policy responses to inflation.[18] It was no coincidence that Richard Gilbert and OPACS were able to construct a GNP account almost upon Keynes's arrival in the USA either. In fact, the war effort and the government's financial and materiel preparations had worried Richard since he joined the administration in 1940.

[18] Schwartzberg (1984: 9) tells of the meeting that "Walter Salant, a member of Gilbert's team who had studied with Keynes, arranged a face-to-face discussion of the differences between Keynes and Gilbert. This was held in the presence of some of Gilbert's staff, at Keynes' suite in the Mayflower Hotel. 'The difference of opinion was simple' writes Gilbert, if I read his scribble correctly. 'Keynes thought the control of total demand through fiscal policy, including forced saving instead of increased tax, would prevent inflation. I tried to persuade him that the rapid increase of defense spending would or could drive prices up sharply at a point far below full employment, citing the experience of 1937 when prices rose sharply while one-sixth of the labor force was still unemployed. I proposed to avoid this by price and wage control, and keep up full steam in spending, pushing the increase in spending into income in production and speeding the attainment of full employment.' Whether Keynes himself was convinced is not clear, but the British themselves later adopted a system of war-time controls, and we [the USA] followed the Gilbert Model."

2.3 OPACS encouraging government expenditure

After Richard Gilbert set up the Research Division at OPACS, President Roosevelt's other economic advisor, Laughlin Currie, who corresponded regularly with Gilbert, informed the President that "some of the ablest economists in the Government" are now working on "the potential expansion and measurement of national output" (Jones 1972: 127). In December 1940, when the USA and BEA were firmly anchored in Kuznets's economy, Richard Gilbert undertook this effort to encourage the government to prepare for the war. As this sub-section will demonstrate, OPACS went from trying to fit their argument within Kuznets's concept of the economy in 1940, to suggesting alternative government accounting methods and finally to adopt Keynes's GNP economy in order to make the case for increased government expenditure. They soon realised that they needed to convince the BEA to change their mind and redefine the economy.

On 9 September 1940 OPACS released a memo arguing that higher government expenditure would prepare the country for war *and* encourage economic growth. They predicted that national income produced could rise to $80.5m in 1940, and the "rise [in defence spending] would undoubtedly be the most important influence in the business situation and a powerful source of expansion" (Gilbert, R. 1940a: 2).[19] In Kuznets's economy defence spending would not directly contribute to the economy but it would have knock-on effects on consumer good output. The real aim of the memo was "the computation of the net government contribution" to the national income (Gilbert, R. 1940a: 9) also called 'income producing expenditures' which emphasised that government expenditure could lead to increases in national income. So they were casting their arguments within Kuznets's economy. While Kuznets's national income could rise to $80.5m, the "gross national product" which included the government expenditure could rise to $91.7m in 1941 (Gilbert, R. 1940a: 14, Table 1). What had to be addressed for propositions to be acted on, according to the administration's "meetings on the business outlook," was the "impact which these

[19] Most OPACS memoranda does not include a named author in the archives, and the majority of the documents were internal government reports, not available to the public. Authorship is given to OPACS when I am not sure about the original writer. Items marked "Gilbert Draft" or signed by Gilbert in the archives, are attributed to Richard Gilbert. This follows the note that Gilbert wrote to H. Dewey Anderson, at the Federal Trade Commission, where he indicates that drafts and memoranda marked "Gilbert Draft" were from his desk (Gilbert 1941, 19 Feb).

stimuli will have upon civilian expenditures and investment goods," not aggregate expenditure (OPACS 1940: 1). It was the effect on Kuznets's economy which should be considered, not Keynes's GNP economy.

This frustrated Richard Gilbert, who was a keen reader of Keynes's work. By 1940 Keynes had released several articles on how to define national income as the aggregation of public and private expenditure, allowing better estimates of a nation's preparedness for war (Keynes 1940a, 1940b, Rothbarth and Keynes 1939). On this, Richard Gilbert remarked that "The British are today aware of their mistakes. Every official and unofficial report bears this out. We are aware of these mistakes. Must it require a repetition of the same bitter experience which the British have undergone to translate understanding into policy?" (Gilbert, R. 1940b: 2).

The dissatisfaction in OPACS with the administration's response became sharper as Gilbert released a memo on 2 December 1940 opening with the statement that "our defense requires the full mobilization of our economic strength, that is to say, the full utilization of our resources, at once" (Gilbert, R. 1940b: 1). The problem, as he saw it, was that the Germans "overrode traditions and prejudices and kept their eyes glued to the essentials of the problem… [while] the democracies permitted prejudices, tradition, and wishful thinking to limit the scope of their notion and the magnitude of their effort" (Gilbert, R. 1940b: 2).

> In the event we go to war, it can be confidently predicted that we shall have to curtail the production of durable consumer goods, that we shall have to curtail investment and even replacement of productive capacity except that required for armaments. The greater our plant and our production at the time such curtailment becomes necessary, the greater our economic strength, the greater our capacity to sustain sacrifices of living standards and national efficiency. (Gilbert, R. 1940b: 3)

Richard Gilbert expected that the national income, as defined by Kuznets, would fall as the USA responded to the war. But he argued that such a fall was not indicative of poor economic performance, because the ability to switch out of consumer goods indicated "economic strength." The underlying concept of Kuznets's economy was insufficient for Gilbert's purpose. In an accompanying letter to Hopkins, Gilbert

emphasised that "this memorandum deals with the most important single aspect of the defense program," the expansion of government expenditure (Gilbert, R. 1940, 2 Dec: 1). Because "there is great resistance" wrote Richard Gilbert, "I would like to prepare some material for the three presidential messages scheduled for January" (1940, 2 Dec: 2). Meaning that he wanted to contribute to nothing less than the State of the Union Address and President Roosevelt's 1940 inaugural speech, which he then did:

> It seems to me that in these three messages the President should cover the basic issues of national policy which are raised in the memoranda. The next four years are critical, not only in the sense that war may come, but also in the sense that they afford what is almost certainly our last opportunity to make the economic system work. In my judgment the president should put the issues before the people. (Gilbert, R. 1940, 2 Dec: 2)

In January 1940 Roosevelt put exactly that issue before the public. In his State of the Union Address he argued that "by an impressive expression of the public will and without regard to partisanship, we are committed to all inclusive national defense… therefore, the immediate need is a swift and driving increase in our armament production" (Roosevelt 1941, 6 Jan: 607-8). Gilbert did "not believe this [promotion of government expenditure] involves political risk" (Gilbert 1940, 2 Dec: 2), and in his inaugural speech on 20 January 1941, Roosevelt re-affirmed that there was "justification for every sacrifice that we may make in the cause of national defense" (Roosevelt 1940, 20 Jan: para. 35). Gilbert's ideas may have reached Roosevelt, but the problem was the prevailing definition of the economy which he needed to get around.

2.4 Gilbert tries to avoid the Kuznets national income 'problem'

OPACS's first attempt at arguing for higher government expenditure, by avoiding Kuznets's economy, was outlined in Richard Gilbert's second December Memorandum, "Fiscal Policy" (Gilbert, R. 1940c).[20] Here he suggested that the government re-think their budgetary accounting method to "facilitate the pursuit of a

[20] Gilbert had already forwarded this to Hopkins and the President before the WPA memo, as mentioned in the letter on 2 December 1941, where Gilbert remarked that "I have not included a memorandum on fiscal policy, as this was covered in an earlier memorandum which I think still useful. If you want it brought up to date, please let me know" (Gilbert 1940, 2 Dec: 2). Hopkins presumably requested an update of this, as a second draft was finished on 13 December (Gilbert 1940c).

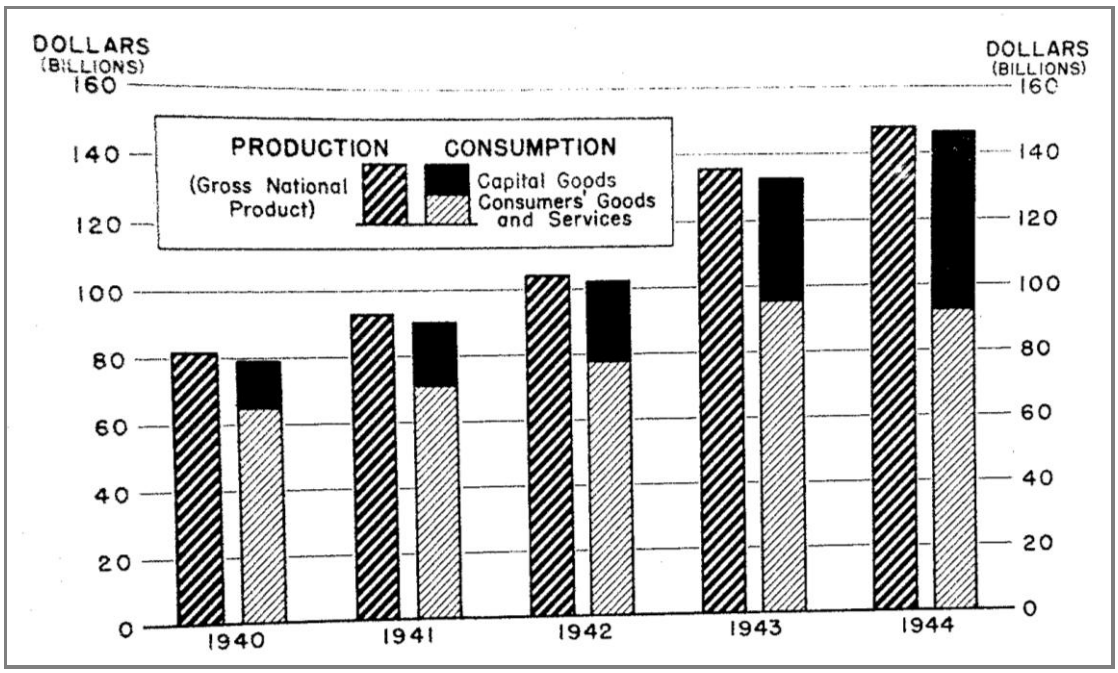
flexible fiscal policy adjusted to the requirements of changing times" (Gilbert, R. 1940c: 34). The government should use a "double or triple budget" consisting of a fixed cost budget, a "developmental or economic budget… [and] a defense or war budget comprised of military expenditure of a strictly extraordinary nature and financed by extraordinary means" (Gilbert, R. 1940c: 34-5). This would allow government expenditure on defence and capital to grow without the government budget for economic objectives – as defined by Kuznets – being disturbed. If this was not done, then extraordinary government expenditure on armaments would become a growing part of government expenditure. If the budget was split, the government could appear to spend a consistent amount of funds on consumer issues, while placing Kuznets's unproductive expenditure in an independent budget and not be criticised for neglecting the economy. Richard Gilbert recognised that the "opponents of the administration's fiscal policy" in 1935 had attacked the idea of splitting the budget as a "juggling of figures… designed to hide from the American people the true extent of the unbalance in Federal Finance" (1940c: 38). Despite Gilbert's impassioned plea to "sweep aside these irrelevant objections and to split our federal budget", no such change was attempted by the administration (Gilbert, R. 1940c: 38).

Richard Gilbert's hopes for a split budget and increased government spending must have been dashed when Kuznets published his national account in 1941, complemented by Milton Gilbert and Dwight Yntema's (1941) national account in June. Richard Gilbert now argued vehemently that the defence program was insufficient. He complained in May 1941 that "the maddening slowness with which the Nation made up its mind has been matched by the slowness with which it has girded itself for action" (Gilbert, R. 1941: 9). The idea of increasing 'national income' as conceptualised by the BEA, NBER, Kuznets and policy makers needed to change:

> It is poverty of imagination and lack of drive that lie at the root of the inadequacies of our program. Neither the military nor the economic high command has shown during the past year an adequate grasp either of the dimension of the task or the urgency of the need which confronts us. (Gilbert, R. 1941: 1)

Gilbert was frustrated with the developments in the USA and moved away from the official definition of national income completely to estimate the GNP which included the "military requirement plus the normal civilian requirement" (OPACS 1941a: 3). The technical appendix to the report on *The Major Economic Factors in Defense Expansion*[21] made it clear that, in these calculations, the objective was to estimate the Gross National Product, from which it was assumed that Kuznets's "national income = 8/9ths gross national product" (OPACS 1941b: Appendix). This gave rise to the diagram below.

Figure 9.1: The first American GNP graph, courtesy of OPACS in March 1941



Source: Perlo (1941, 6 March); Franklin D. Roosevelt Presidential Library

The gross national product added up capital, non-durable goods and services, not only Kuznets's private sector output. The consumption of goods and services included "consumption by the armed forces" and capital goods "includes private plant and equipment, residential construction, war materials, and defense construction, public works increase in inventories, net export balance" (Perlo 1941, 6 Mar: Table 1). It was an explicit account with attached graphs to include government in the economy.

[21] This appendix is only found in Viktor Perlo's copy of the report, which he sent back to Richard Gilbert and has "Richard V. Gilbert" written across the header (Perlo 1941, 6 Mar).

Having failed to convince the administration to increase government expenditure, as it would reduce 'national income', and then failing to convince the administration to count the war expenditure separately to avoid that problem, Gilbert and OPACS tried to re-define what was meant by national income. They took the same route Keynes had taken, and incorporated government expenditures straight into the national income estimate. When Keynes arrived in the US and met with Laughlin Currie and Harry Hopkins to present the British GNP account, one can see why Currie, who was Richard Gilbert's boss and friend, directed Keynes to him. OPACS's nascent GNP estimation would have been preferable to the BEA estimates for Keynes. On the difference between the BEA and OPACS, Keynes noted that "there is too wide a gap here in Washington between the intellectual outlook of the older people and that of the younger. But I have been greatly struck during my visit by the quality of the younger economists and civil servants in the Administration" (Keynes 1941, 27 Jul. *CW* 23: 193). These younger economists were the Gilbert-Humphrey Keynesian "school of thought" as J.M. Clark named them (Clark, J.M. 1941, 24 Jul; *CW* 23: 191). At the same time they were in the political top positions, advising the President directly.

The BEA only published GNP accounts in 1942, and even then they included a deduction of military investment as unproductive, following Kuznets. I suggest that Milton Gilbert and his team tried to use the GNP method because OPACS had an impact on policy, and their definition of the economy was important among the key economic advisors to the president, Laughlin Currie, Harry Hopkins and Richard V. Gilbert. In January 1941 Richard Gilbert sent his younger cousin Milton Gilbert draft reports which outlined the arguments for increased government expenditure and an alternative way of looking at the economy (Gilbert 1941, 14 Jan). There is no evidence that the BEA officially considered GNP estimates prior to 1942. It seems natural that Milton Gilbert, frustrated with the grip Kuznets had on BEA national income concepts, should seek advice from his older cousin and teacher from Harvard, who also found the official notion of national income problematic for the war effort. This is further reinforced if one considers that Milton and Richard were "life long friends" and "had even shared a home" for a few years (Schwartzberg 1984: 17).

Indeed they lived together in Washington D.C. during the war, when Richard headed OPACS and Milton became the head of national income measurement at the BEA.[22]

The document record on this transfer is not strong, but then again, Richard Gilbert stopped writing speeches for the President's economic policy makers when he realised "it was easier to convince Hopkins orally" (Schwartzberg 1984: 7). He had taken a similar approach to policy recommendations for the President, and he only met in person with Keynes. All correspondence and notes were always done by Salant or Humphreys. It seems clear to me that if Richard Gilbert could settle for conversation to convince President Roosevelt, Harvard professors, economic advisors and Keynes, then he is unlikely to have treated his younger cousin, with whom he was living, any differently.

3. The UK vs. the US

In 1941 the UK and USA had two different official definitions of the economy, and the developments that followed set the stage for the first global consensus of what an economy is.

In Britain, Keynes had convinced HM Treasury to redefine the economy around public and private expenditure. He brought these accounts to the US to argue for more financial support and, while there, became involved with Richard Gilbert and the Office for Price Administration and Civilian Supply.

In the USA, Richard Gilbert had argued since early 1940 for increased government expenditure to prepare for war. His recommendations were turned down on the grounds that such expenditure would negatively impact national income. In response OPACS tried to induce the government to adopt a double or triple budget, which was not taken up, and eventually moved on to using a GNP notion of national income, incorporating government expenditure straight into the measure of the economy. This

[22] As explained in personal correspondence with Jenny Schwartzberg, Richard Gilbert's granddaughter, (March 2010). She added that "Richard and Emma Gilbert and Milton and Ruth Gilbert with their children lived together in Washington, DC in a house on Rodman Street for two to three years (1939 to probably 1941)."

was based on *How to Pay for the War* (1940) and the British White Paper (HM Treasury 1941), supervised by Richard V. Gilbert and encouraged by Keynes.

Kuznets, for his part, had been responsible for the American concept and measurement of national income since 1932, defining the economy as the population's ability to consume private output. Both the NBER and BEA had until 1941 produced national accounts based purely on this concept. In 1941 Milton Gilbert took over from Kuznets's assistant, Robert Nathan, and directed national income measurement at the BEA. Milton Gilbert's team agreed that they needed to bring the national accounts and Kuznets "down to" goods and services and far away from welfare (Jaszi 1985: 5). From 1941 the BEA opposed the idea of measuring welfare, which had concerned Kuznets, but they had no independent theory of the economy they could apply. When they finally succeeded in taking welfare out of the national accounts published under Milton Gilbert in 1942, they tried to adopt Richard Gilbert and Keynes's GNP economy concept.[23]

During the war, the BEA's method for estimating national income would be an uneasy compromise between the British and OPACS GNP economy and Kuznets's consumption focussed economy. Kuznets's concerns were placated by excluding military investment in the GNP accounts of 1943 and 1944 (Marcuss and Kane 2007). As an apparent stalemate between Keynes's GNP economy and Kuznets's consumption-welfare economy was uneasily found in the US, it led to an academic debate between the national accountants, Milton Gilbert, Simon Kuznets and Richard Stone from 1942 to 1944. This debate would build the BEA's case for GNP accounting and slowly erode Kuznets's ideas and position within the national accounting establishment. This section and its sub-sections show how Kuznets was slowly removed from the definition of the economy and how an international

[23] Constructing national income estimates around welfare and consumption was not pursued by the BEA after 1941. The welfare focus itself was taken up only briefly in the seventies by Nordhaus-Tobin (1972) and Stewart's (1974) Measure of Economic Welfare, but for the BEA the issue was one best forgotten. This is exemplified in the closing paragraph of then BEA Director George Jaszi's letter to Richard Stone, five years after Simon Kuznets's Nobel Prize in 1971: "Nothing would delight Helen and me more than to have you accompanied by Giovanna at the Woodrow Wilson Center – we do not care whether engaged in scholarly research or in the pursuit of your welfares – as long as you do not plan to measure the latter. But on second thought, in your case I would even close an eye if you did, although I would have to regard it as a regrettable necessity" (Jaszi 1976, 9 Sep.).

consensus was used to make the case against him. This shows how the 20th and 21st century arguments over the economy now had to be carried out in professional journals, between national accountants, and no longer remained the domain of the influential government economist. The war not only changed the economy: it changed the forum for debating the definition of the economy.

3.1 The Gilbert-Stone-Kuznets debates

Richard Stone, who was responsible for the national income estimates in the UK as Keynes's assistant at the Central Statistical Office, found "the Department of Commerce's [later BEA] definition of national income rather inconvenient", especially the treatment of corporation taxes and those sections "relating to public authorities" (Stone 1942: 155, 157). This sub-section shows how the academic journals were the forum for debating the definition of the economy, just as they had become the forum for discourse on economics, by academics, in the 1940s. Stone attempted to edit the American figures to make them comparable to the British definition of the economy.[24] He was keen to stress that in comparing countries by

> setting out tables of national income and expenditure there are two problems which it is important to keep separate. I shall call these respectively the economic and the logical problem. The economic problem is concerned with what it is we wish to measure and what conventions it is convenient to follow in the treatment of the items entering the tables. (Stone 1942-3: 1)

The economic problem posed the questions: What is the economy we wish to measure? And how can we measure it? The logical problem was, for Stone, relatively simple. It was deciding whether to account for transactions at factor costs or market prices, but "[t]he difference between these concepts is simply the sum of depreciation allowances and indirect taxes" (Stone 1942: 154) and "there is no convention or convenience about this; it follows unambiguously from the original decision" about what defines the economy (Stone 1942-43: 3). So Stone's concern with the BEA national account was not the logical problem but the economic one, as the American definition of the economy was different from the British.

[24] This also included adding social security contributions of employers, federal debt interest and deducting imputed rents on owner-occupied houses, corporation income and excess profits taxes, capital outlays charged to current expense and inventory revaluations (Stone 1942: 155)

These differences between the UK and US were the remnants of Kuznets's concept of national income in the US accounts. Milton Gilbert was quick to reply in the *Economic Journal* that "in general, I agree with Mr. Stone's objections to our treatment of corporation income taxes, social security contributions of employers, and inventory revaluations in our measurement of net national income. We intend to modify our definition in the future in a way which will partly take care of these objections" (Gilbert, M. 1943: 81). Despite Milton Gilbert's apparent intention to revise Kuznets out of the accounts, Stone was sceptical. Stone wrote that he would "doubt the possibility of any very adequate treatment in the absence of statements of real assets in the hands of public authorities" (Stone 1943b: 83). A government capital account would allow proper treatment of government investment and expenditure, but the Americans had a very specific reason for avoiding this issue, and indeed they still have not fully implemented this in their modern national accounts (Vanoli 2005), for those same historical reasons, even if they are now forgotten.

For Kuznets, Government expenditure on goods and services was "analogous to the undistributed profits of businesses" (Stone 1943a: 63). As discussed in this chapter, the difference between national income paid out and national income produced was business savings, which, Kuznets argued, equalled the outlay of government (Kuznets 1941, 1944: 2). According to Stone this meant that government was treated like any business sector "making a profit equal to the budget surplus or a loss equal to the budget deficit" (Stone 1943a: 63). Stone argued that "the treatment adopted indicates a different attitude to Government economic activity from that shown by many other writers", especially the British ones (1943a: 62):

> Following Mr. Kuznets' line of thought, it is possible to draw any line that seems reasonable between goods and services which are sold to the public for taxes and fees, and those which are to be regarded as Government capital development. (Stone 1943a: 67-8)

The BEA should, according to Stone, publish government investment figures, and they should not use Kuznets's problematic definition of the economy, but rather treat government as "analogous to the hiring of final services by the private sector of the

economy" (Stone 1943a: 64). Milton Gilbert agreed, but was keen to avoid an estimate of the government capital account, exactly because it would allow Kuznets to calculate an 'official' National Income Produced figure. Without a net government capital account, Kuznets could not provide an estimate of his national income with equivalent empirical authority to the BEA, as he would have to estimate the capital account himself. Milton Gilbert explained to Stone, and the British readers, that the BEA "have avoided any net concept in connection with the national product or expenditure, because that form of presentation inevitably leads even economists to obtain a figure for net capital formation by the simple subtraction of depreciation from gross capital outlays" (Gilbert, M. 1943: 76-77). The BEA did not want people estimating the US government capital account, as they were still struggling with the influence of certain "economists" who wanted to estimate something different from GNP as the economy. To resolve this and other technical issues, a meeting was called by the BEA in Washington D.C. for September 1944. Simon Kuznets was not invited.

3.2 1944 Tri-partite discussions of National Income Measurement

What started as a journal article exchange became a tri-national meeting, setting the tone for numerous meetings sponsored by the BEA and HM Treasury to convince various statistical offices to adopt GNP as a model of the economy (Studenski 1958). Milton Gilbert and his young team, Ernest Doblin, George Jaszi, Charles F. Schwarz, William H. Shaw, Dwight B. Yntema and Edward F. Denison, who composed the report on the meeting (Denison 1945),[25] all attended the meeting on behalf the BEA. From abroad only two people attended: George Luxton, a Canadian economist, and Richard Stone, who "was sent over to see how far agreement could be reached" (Stone 1984).

Despite the BEA dominance in numbers it appears to have been Stone who directed the course of the debate. Where agreement was found, it was Stone and the British accounts which were given precedence. Denison's report included a list of "the important changes in the Department of Commerce [later BEA] national income, gross national product, and income payments series that will result from the

[25] The draft of the report (Denison 1944) was sent to Stone in November 1944, but the final published version (Denison 1945) was finished in 1945 (Vanoli 2005), so the reference is to 1945, and not 1944 when the meeting was held.

decisions" made at the meeting, but made no mention of any changes to the UK system (Denison 1944: 20).

The outcome was "extremely satisfactory" for Stone (1984) who recollected that "the meetings were very friendly" – an indication, perhaps, of his control over their direction. This should be juxtaposed with the American recollection of "discussions [which] were stimulating and led, partly through persuasion, partly through compromise, to substantial agreement" (Denison 1945: 3) or through what Milton Gilbert called particularly "lively discussions" between himself and Richard Stone (Patinkin 1983: 538, footnote 38). The final Tri-partite Report stated that most definitions and concepts would henceforth be "uniform as a consequence of the adoption by the United States and Canada of the United Kingdom methodology" (Denison 1945: 21).[26] The UK had convinced the US to change its official definition of the economy, or more correctly perhaps, had provided the international consensus that would allow the young BEA economists to remove the last parts of Kuznets ideas from the US definition of the economy.

After the meeting Stone was asked for his comments on Denison's report before its publication, and he made a *single* correction. He changed the definition of national income. Stone deleted Denison's American draft definition:

> National Income measures the earnings accruing to these suppliers of the factors of production that are individuals resident in or temporarily absent from the country or government units of the country as a return for their participation in production (Denison 1944, part III: bullet #3).

Replacing it instead with:

> National income measures the earnings accruing to residents for the participation in production of the factors of production they supply. (Stone 1944, 1 Nov)[27]

[26] In particular these were the treatment of interest on the national debt (to be excluded), company taxation (as a direct tax, not indirect and thus excludable as in Kuznets), and imputed rents for owner occupied housing (to be included)

[27] The report published by the NBER used italics rather than the underlines from the original manuscript (Denison 1945: 7).

Denison's proposed definition that the national income included "individuals" and "government units" appears to be aimed at Kuznets. For Stone, as for Keynes, Meade, Rothbarth and OPACS, this was an unnecessary inclusion, as public and private expenditure made up the economy. It had of course been the American's bone of contention with Kuznets, but Stone would have found it redundant, which is why he deleted it. In the final report Stone's definition was used (Denison 1945).

At home the young BEA economists were keen to point out how the Tri-Partite meetings had formed an international consensus. The government was included in the economy, and was not an intermediary cost as Kuznets repeated in 1944 (Kuznets 1944). As the international agreement stated, "government services are to be valued at the factor cost of furnishing them," and the US should introduce it not because Milton Gilbert and his team of economists had been pushing for it – which they had – but "in conformity with the present practice of all three governments represented at the meetings" (Denison 1945: 9). Denison went on to point out that "I have preferred the more customary terminology in order to distinguish our treatment clearly from that of Simon Kuznets" (Denison 1945: 9, footnote 1). The next US national account (BEA 1947) included military expenditure and all government expenditure as part of national income.

The Tri-partite agreement allowed the BEA to uncouple itself from Kuznets's notion of national income, finally adopting Stone's and therefore Keynes's concept of the economy, with the exception that the Americans refused to estimate an explicit government capital account or business savings. Vanoli (2005: 131) complains that Denison's report "unfortunately does not explain the reasons for the American opposition" For estimating these two accounts. The reasoning behind the blanket refusal, I argue, is the looming presence of Kuznets on the American national accounting scene. Kuznets categorically opposed the inclusion of government capital expenditure as part of national income, and separating the government account would only give him an opportunity to argue that the capital side should be removed entirely. In fact, a year later, Kuznets (1945) reluctantly agreed that exceptional circumstances could allow government capital expenditure to be included in national income during

wars, as losing a war would be detrimental to society. This opened the door to including a government capital account in the US national accounts. But Kuznets included the caveat that once peace was accomplished such capital expenditure should be taken out of the national account immediately. Estimating a government capital account would have been tantamount to giving Kuznets an advantage on the young BEA economists, who were still fighting his influence. For these idiosyncratic treatments, it was agreed that "in each country special types of payment may require special decisions" (Denison 1945: 11).

3.3 Kuznets's objections and the BEA's response

I have argued that Milton Gilbert's national income division disagreed with Kuznets's definition of the economy in 1941, and throughout the early 1940s. This section argues that Kuznets opposed the GNP economy, and in particular the inclusion of government expenditure as a final output throughout the 1940s. This goes against the idea that Kuznets was both a supporter and indeed the progenitor of GNP (Marcuss and Kane 2007, Landefeld et al. 2009). I argue he was its principal opponent. This is clear in his response to the academic and Tri-lateral debate between Gilbert and Stone, when Kuznets published a new national account, also in 1944, supported by the NBER. I will argue that Kuznets's diminishing administrative power and his opposition to the international consensus would lead to his rejection.

Kuznets argued that "in a nonmilitaristic country the emergence of the armed conflict as a new channel for final use, affecting a large proportion of resources, calls for a concept of national product that in essence is noncomparable with that of peacetime" (Kuznets 1944: 1). Kuznets suggested that his National Income Produced concept, which covered the flow of goods to consumers and private net capital formation, be combined with the flow of finished war products and the net additions "to durable equipment and construction designed specifically for the production of war products" (Kuznets 1944: 2). In making his argument he emphasised that this was not GNP, and that government expenditure should still be treated as an intermediate, not final, output.

> The concepts used here differ from those of the Department of Commerce [later BEA] which have wide currency. The Department's gross national product

> assumes that all government expenditures represent final products, whereas we retain the assumption adopted in pre-war estimates, viz., that taxes paid by business enterprises (excluding the rise caused by the war) represent services by government to business and, therefore, intermediate rather than final products…. In formulating the concept of gross national product no good reason was seen for modifying the assumption that some part of government services is an intermediate rather than a final product; or for deviating from the somewhat arbitrary but customary assumption which measures these intermediate services by peacetime payments of corporate taxes. (Kuznets 1944: 2, footnote 2)

Kuznets's economy was different from the increasingly popular GNP economy measured by the BEA. Kuznets maintained his "assumption adopted in pre-war estimates" (i.e. Kuznets 1933, 1934a, 1935, 1937, 1941) that the government was an intermediate producer of services, and government expenditure was not part of the national income – the "Department's [BEA's] gross national product." Moreover, the whole business of producing materiel was problematic for Kuznets. Current expenditure on materiel was not, according to Kuznets, on a par with expenditure on consumer goods. But one could temporarily define the government expenditure as capital investment, assuming it could be modified after the war to provide consumer goods (Kuznets 1945: viii). But even then, the government capital investment in weapons was only a subsidy to some private company. "In the case of government activity, the meaning depends upon the validity of an assumption that, in essence, makes government outlay an important independent variable in determining the total product of the nation", which Kuznets argued it was not (1945: 31).

The response to Kuznets's 1944 national account was organised by *The Review of Economics and Statistics* which "invited three of the leading experts in this particular area of study to comment on Professor Kuznets' findings" and asked Kuznets himself to reply (Gilbert et al. 1944: 109). Milton Gilbert, Hans Staehle of Harvard and Wladimir S. Woytinsky from the US Bureau of Employment were lined up to argue with Kuznets, and Milton Gilbert opened very directly, saying Kuznets had failed.

> With all his accustomed statistical resourcefulness and imagination, Professor Kuznets attempts in his recent study to resolve a problem that has long been considered insolvable. It is to construct a comparable index of the national product

> over a period in which the composition of output has changed drastically, in this case over the period of transition from peace to war. The attempt must be judged a failure - in the sense that the central difficulty of comparing incomparables is as far from solution as ever. Of course, Professor Kuznets cannot write in this field without illuminating the problems involved or leaving helpful suggestions on the way. But lest I generate my usual enthusiasm about his work let me commit myself to the view that the statistical measures presented are wholly lacking in applicability to practical economic affairs, either present or postwar. (Gilbert et al. 1944: 109)

Kuznets's attempt to re-introduce his definition of the economy had "to be judged a failure" according to the BEA's Milton Gilbert. They were not "practical" and did not give a consistent definition of the economy, having to change between states of war and peace. Gilbert had not wanted to use Kuznets's definition of the economy in 1941 but was forced to do so. Now the shoe was on the other foot as Kuznets was forced to use the GNP economy just to make his argument. But the BEA maintained its inclusion of military spending in the 1947 national account, conforming to the tri-partite agreement, and they included the whole of government expenditure as national income (BEA 1947). This was to Kuznets's loud protestation, that such GNP accounts were "destined to become one of the most used, and misused, sources of economic information" (Kuznets 1948: 151).

By 1948 GNP accounting was however well established at the BEA, through the support of international conferences on national income estimation[28] and Stone's 1947 paper for the United Nations Committee of Statistical Experts, which was becoming the blueprint for how to measure and define the economy. As a result, Gilbert, Jaszi, Denison and Schwartz responded confidently to Kuznets (1948) criticisms that "we believe he has considerably clarified *his* position toward the approach *we* use in *our* work. It is helpful, too, that he has provided us the opportunity to explain why, after serious consideration, *we* did not utilize *his* proposed treatment of these problems in the practical task of measuring the national income of the United States" (Gilbert, M. et al. 1948: 179, my emphasis). The BEA had been backed by OPACS, Keynes, Stone

[28] Such as the six countries conference in Princeton hosted by Stone in 1945 (Vanoli 2005: 131).

and the international community and had found its voice – a very Keynesian voice at that.

4. How GNP came to America

Kuznets and his ideas dominated the American way of thinking about the economy until 1942, when, after much work, first by the Office for Price Administration and Civilian Supply, and then by the young economists at the BEA, the first official GNP account of the US economy was released. This concluding section summarises how the GNP economy had come from the UK, and how the debate about the economy had shifted from influential government economists to international consensus building and academic journals. Defining the economy no longer fell to individual national statistics offices, as it had since the mid-19th century. After Keynes and Kuznets it no longer fell to single influential government economists. It became a specialist subject, negotiated in national accounting journals and national accounting conferences. All this began with the efforts at the OPACS and BEA, with Keynes's eventual involvement and encouragement. As Keynes wrote Salant:

> I have no doubt that you will all suffer a great deal of frustration in the coming months. Nevertheless, I should not be surprised if, when a year is past and you are able to look back, you will find that you got much more of your way than you were realising at the time. (Keynes 1941, 27 July *CW* 23: 193)

1941 was a frustrating year, but at the end a GNP economy had been partially adopted by the BEA, and American opinion on what defined the economy had shifted, as indeed had their support for the British.[29] As the difference between the US and UK definitions of the economy came to light in 1942, Richard Stone wrote articles suggesting improvements to streamline the definitions, probably on Keynes's encouragement. As a result, the Tri-Partite Meeting was called in 1944, and after this the BEA could successfully take Kuznets out of their economy, even if the US and UK systems were not identical.

[29] Keynes says that the American President had given his assurance that the US would take their full share of "political and as well as economic" responsibility after the war (Keynes 1941, 2 June: 8). He also mentions that he met with Einstein in Princeton, who was lying in bed, suggesting "if, when we are ready, we bomb Germany continuously and without remorse they most certainly will not stand it" (Keynes 1941, 2 June: 12).

Throughout this period Kuznets protested against the use of GNP, going so far as to publish an alternative national account for 1944. But while he had dominated the BEA until 1941, and still shaped their definitions until 1944, international backing through journals and conferences gave the BEA after 1944 the confidence to criticize Kuznets explicitly, eventually rebuffing him after the war. During Kuznets's time as the authority on national income, from 1932-1942, there had been some suggestions to incorporate the government expenditure in the economy. Clark Warburton, at the Brookings Institutions, had made an estimate of what he called the "Gross National Product" including government expenditure (Warburton 1934: 383, 1935: 175). While Marcuss and Kane (2007) claim an obvious connection between Warburton's estimates and Kuznets's ideas – without explaining what that connection is – Carson's exposition (1975), which covers both Kuznets and Warburton, suggests that there is no obvious link between Kuznets and a definition of the economy resembling GNP.

Warburton wrote two five-page supplements to the four volumes of empirical estimates of the economy published by the Brookings Institution (Leven et al. 1934). The books followed Kuznets's definition of the economy, and Warburton was apparently unable, or perhaps reluctant, to publish his supplements in the books. Both of Warburton's papers hide the government expenditure on their last page, and as Carson noted, Warburton was "was not especially attached to the term" gross national product (Carson 1975: 162). While the impact of Warburton on Kuznets was non-existent, as Kuznets maintained his definition of the economy until 1942, one might suspect some effect on the young BEA economists – which some defenders of an early tradition of US GNP could propose as a final defence. By the BEA records, it seems that none of the young BEA economists appear to have read Warburton's supplements, and if they did, they made no mention of it. Dwight Yntema, who estimated the national income produced with Milton Gilbert in 1941, ought to have known about Warburton's work, because Yntema's older brother, Theodore O. Yntema (1935), reviewed Warburton's publication. If Dwight Yntema knew in 1941 what Warburton had written six years earlier, he clearly did not think it important enough to inform Gilbert. As such, it seems that Warburton's estimates were of little significance to the wider debate on how to define and measure the economy in the

USA. Kuznets's economy dominated the discourse prior to 1941, and he was at odds with the GNP economy.

Tily (2009) is right to point out that Keynes's role in the history of national accounting has been greatly underestimated. But academic economists could no longer convince politicians just to adopt a new definition of the economy. Keynes's GNP economy did not spread to be a global definition because it was somehow a 'better' indicator of the economy; it was simply more appropriate for the time. The international adoption of GNP after Stone's 1947 United Nations paper could only happen once the US agreed to the British definition of the economy. The reason the Americans and British agreed was a combination of the threat of war and a lot of work by national accountants and economists within the BEA, OPACS, and across the Atlantic. This type of cooperation and debate had to continue and grow in order for a global definition of the economy to exist. The modern consensus on what defines the economy derives from exactly such an effort between government economists and statisticians working in central statistical offices and meeting internationally to set out the accounting framework, as with Stone's 1947 paper and the subsequent UN Systems of National Accounting manuals produced in 1964, 1968, 1993 and 2008. The period from 1930 to 1948 in the USA shows us how that model of consensus building was first established. It also indicates the potentially short institutional memory of government bodies, even when it comes to important issues such as the definition and measurement of the economy.

Kuznets's definition of the economy was the basis for economic policy making in the US until 1941. By 1948 it had been forgotten by policy makers, and indeed when historians revisited the Second World War, we had forgotten that Americans in the 1930s defined the economy very differently. Richard Gilbert and OPACS had struggled to get the US to invest in war capacity, while the administration worried that such investment would be bad for the economy on the basis of Simon Kuznets's definition of the economy. They needed to redefine the economy for their argument to be accepted.

Chapter 10

The on-going reinvention of the economy: a conclusion

> Without a continual falsification of the world by means of numbers, mankind could not live.
>
> -Friedrich Nietzsche 1883 [2003: 35]

In this thesis I have argued that politicians and economists have sought to put a value on the size of the economy since the 1620s. To do so, they have had to define the economy and, more often than not, redefine it to fit with current affairs. It is perhaps no coincidence that the accepted definition of the economy has changed every 50-70 years since the economy was invented, as society has changed. Time and time again, from Walpole to Pitt and Gournay to Gilbert, economic policy has been based on an agreed definition of the economy and the political use of the data collected for national accounts. Nietzsche's suggestion in *Good and Evil* (1883) that "without a continual falsification of the world by numbers, mankind could not live" echoes well with our search for an empirical definition of a changing world. I would not call these past definitions of the economy 'falsifications' or false; rather they are the dominant definitions for their period. This concluding chapter sets out the contributions this thesis has aimed to make to the history of economics, our understanding of the economy today, and point out how even our seemingly invariant concept of the economy keeps changing.

Since its adoption in the 1940s, GNP as a definition and measure of the economy has become a global consensus through the UN System of National Accounts (SNA). Keynes's original stock and flow GNP economy has been replaced by flow accounting Gross Domestic Product (GDP). A very good literature on the post1950 developments of GDP shows how our economy has been redefined through SNA revisions in 1964, 1968, 1993 and 2008 (Ward 2004, Vanoli 2005, Bos 2009). Each SNA revision modifies our definition of the economy, even if the debate is limited to specialist national accountants. Some changes are more dramatic, as in the 1964 revision where all assets where replaced by flows in the economy. Most are gradual, like the 1993 SNA revision where new transactions and items were added to the

economy, and "those countries that have moved [to SNA1993]... have all recorded a higher level of GDP than was previously the case" (OECD 2007: 31). One good example from SNA1993 is software purchases by firms which were redefined from expenditure to investment.[1] By 2003 the OECD had published a proposed methodology for implementing this (Ahmed 2003), and in 2006 the UK Office for National Statistics added software purchases as an investment and not a company cost to the UK economy (Chamberlin et al. 2006). In 2007 they updated their methodology and when the statistical dust had settled, the

> increase in nominal GDP over the period 1970 to 2005 is expected to be around 0.7 per cent, with a similar cumulative effect on real growth. (Chamberlin et al. 2007: 23)

It took a decade to implement the change, which far from being a purely statistical exercise shifted the definition of the economy so that software was an investment, and the UK economy was 0.7% larger on average. These modifications and redefinitions have a very real impact on empirical economics and form part of a debate economists have participated in since the 17th century. There have always been those who argued against the dominant definition of the economy, and Kuznets is not the only person to complain that our current definition of the economy, GDP, would become "one of the most used, and misused, sources of economic information" (Kuznets 1948: 151). Since the 1960s, when assets were taken out of the GDP economy, there have been complaints that our 1940s definition of the economy was insufficient for the modern world (Cole 1997). Robert F. Kennedy famously said:

> Truly we have a great gross national product, almost 800 billion dollars, but can that be the criterion by which we judge this country? Is it enough? The gross national product counts air pollution and cigarette advertising and ambulances to clear our highways of carnage. It counts special locks for our doors and jails for the people who break them. It counts Whitman's rifle and Speck's knife and television programs which glorify violence in order to sell toys to our children.

[1] The relevant change from SNA1968 to SNA 1993 is that "Produced assets (AN.1) in the 1993 SNA include not only tangible fixed assets (AN.111), but also intangible fixed assets (AN.112) such as mineral exploration (AN.1121), computer software (AN.1122), and entertainment, literary or artistic originals (AN.1123)" (UN 1993: 62).

> And the gross national product does not allow for the health of our children, the quality of their education, the joy of their play. It is indifferent to the decency of our factories and the safety of our streets alike. It does not include the beauty of our poetry or the strength of our marriages, the intelligence of our public debate or the integrity of our public officials. It measures neither wit nor courage, neither our wisdom nor our learning, neither our compassion nor our duty to our country. It measures everything, in short, except that which makes life worthwhile.
> (Kennedy 1968, 4 Jan)

"Everything except that which makes life worthwhile" said Kennedy, almost echoing Simon Kuznets's reference to government expenditure as an "evil necessary in order to be able to make a living" (Kuznets 1937: 37). They both argued that the economy should not be defined by GDP, but by a measure closer to private consumption and welfare. In light of the 2008-09 financial crises a similar request to "identify the limits of GDP as an indicator of economic performance and social progress" was made by the French government (Stiglitz et al 2009: 8; 2010), echoing calls from other economists over the last forty years (Nordhaus and Tobin 1972, Stewart 1974, Zolotas 1981, Daly 1988, Daly and Cobb 1989, Cobb et al. 1995). If such challenges to GDP are to be successful, the critics need to appreciate that national accounting has a deep theoretical context, perhaps a fundamental one. It defines the way we measure our economy, and by doing so, it defines the economy.

"The past" wrote L.P. Hartley in *The Go-Between* (1959: 9) "is a foreign country: They do things differently there." They also defined the economy differently there, and if we can understand how they managed to change their definition of the economy, it might help us do the same. The first step is asking the right question. We should not think of GDP as an 'indicator' of the economy, but rather think of it as the definition of the economy. Then we can ask if the current definition of the economy is appropriate, just as Keynes, Kuznets and all past national accountants did.

1. New Perspectives

This thesis has tried to approach the history of economics, and indeed our own notion of what the economy is, from a new perspective. By investigating how economists defined and measured the economy they lived in, a new perspective on the history of economics emerges, which addresses a current blind-spot in the available literature.

Available histories of economics tend to investigate the history of current theoretical issues and organise their narrative around price theory (Landreth and Colander 2002, Roncaglia 2005). Backhouse recognises this trend and instead investigates "the specific problems that economists try to solve" in their respective context (Backhouse 1994: 1-2), while Heilbroner (1972) focuses on the biographical aspects of an economist's life to explain their theories. These histories tell us about what past economists were thinking but do not focus on the economy within which they framed their arguments. That is because the different literatures accepts the idea that there was no economy prior to 1776 (Schabas 2005, Hoppit 2006), use a narrative of mercantilism to encapsulate all thinking between 1600 to 1775 (Magnusson 1995), where there was little interest in empirical investigation (Maddison 2007) and, some even argue, that it was the authors of the 1750s who "were among the first to develop a theoretical approach to economic analysis" (Thornton 2007: 453, Coleman 1969). I hope to have shown that this is not the case. Indeed the history of economics in many places has been too coloured by what Adam Smith wanted us to think about those who came before him. As a result, the specialist authors who focus in individual persons or narrow time periods – and who knows that a lot of empirical and theoretical work was happening – tend to set their subjects outside the mainstream, as the macro narrative does not conform to their individual histories.

There are a number of histories of national accounting and empirics which suffer from a blind-spot almost contrary to the general histories of economics. Historians of empirics have established that empirics were always important for policy makers (Porter 1996) and that the mercantilist age had some good empirical work (Buck 1982, Hoppit 1996b, Stone 1997). But their focus on the data content meant that they never asked what theory was being quantified, what impact it would have on policy, and what the overarching definition of the economy was. The few that did ask questions of the data, did so to produce longer time series to provide histories of economic growth, be it defined by Adam Smith's productive output (Giffen 1889), GNP (Deane 1955, 1956) or GDP (Maddison 2005, 2007). The histories of national accounts that span centuries focus on the method of accounting and assume that an invariant economy was waiting to be measured. This economy was finally discovered

in the 19th century according to Giffen (1889) or in the 20th century according to Studenski (1958) and Kendrick (1970), who in turn disagree on what the economy actually is as they are each looking at a different definition. Shorter histories focus primarily on the post-1950 period, taking Studenski's interpretation of history as given, despite its Whiggish tendencies (Carson 1975, Vanoli 2005, Bos 2009).

My contribution lies between these two historical traditions. I have tried to tell the history of the juncture between defining and measuring the economy. As it turns out, it is a history which reveals a deep and empirical tradition of economics in Britain, dating back some 400 years, and it highlights how the economy has been at the centre of this debate, constantly reinvented. It illustrates Backhouse's (1994: 2) point that "changing the organizing principle has a dramatic effect on the way one has to tell the story," and in this case I hope to have shown that it shapes our interpretation of the history of economics and our understanding of what an economy is.

Perhaps this history can provide an alternative macro narrative for our history of economics in Britain? This would be a narrative where the 17th and 18th centuries are treated as empirical with deep theoretical debates, not some mercantilist amateur debating session. The long 19th century would be considered as dominated by two orthodoxies; first Adam Smith's productive and unproductive split, followed by Alfred Marshall's all inclusive private economy. The 20th century then follows with an intense debate over government's role in the economy during the World Wars, and eventually a global consensus on the economy emerges, but this is a definition which is fluid and changeable. Such a perspective opens up a lot of new ways to read historical documents and think about economics. I hope it is useful.

1.1 A contribution to the history of economics

I believe that this thesis has a strong contribution to make to the history of economics, through its extensive use of primary sources that have not been utilized in the literature and its focus on a different organizing principle: the economy.

The early 1600s were dominated by a traditionalist method of thinking, and there was no notion of an economy in these early writings (Wilson 1600, Malynes 1601, 1603). With the 1620s crisis a space for the economy was established, but unlike

Kindleberger's (1991) suggestion that 'something' changed, I suggest more specifically that Edward Misselden (1622, 1623) put international trade beyond royal control and argued that a trade surplus would enrich the nation, independently of the monarch. Unlike Appleby (1978) and Poovey (1998), I argue this was put in terms consistent with traditionalist rhetoric, thereby inventing an acceptable space for the economy in the 17th century.

I have argued that mercantilism never existed, and like many others (Schumpeter 1954, Magnusson 1994) I argue it was a rhetorical device employed by Adam Smith. I may have focussed on the bullionist reading of Thomas Mun, which is widespread, but that is representative of my wider opinion about mercantilism: It is a useful time-delineator (1620-1775) but it does not relate to any significant economic doctrine or consistent theory, especially not one held by Thomas Mun. In contrast to Smith and others (e.g. Heckscher 1994), I agree with Supple (1954) that Thomas Mun (1621, 1630 [1664]) held a consistent definition of a domestic economy, which grew through international activity on the balance of *payments*, not trade – contradicting at least the bullionist mercantilist story from the perspective of what an economy is. The late publication of Mun's work and its direct competition with the supposed 'golden age' of political arithmetic suggests that Mun's definition of the economy dominated the late 1600s.

Like Roncaglia (1985) and Goodacre (2004) I present William Petty's political arithmetic as a consistent and developing theory of the economy. But unlike much of the literature (e.g. Maddison 2007) I argue that political arithmetic's golden age was from 1690 to 1720, not from the 1660s onwards. Its main proponent was Charles Davenant whose economy mixed the international trade on the balance of payments with domestic production, investment and income. This economy, I argue, framed policy making in the late 17th century and the economic debates of the early 18th century, as it was backed with empirics.

Much of the literature suggests that the first three quarters of the 18th century were a "period of neglect" (Studenski 1958: 40), and the years from 1700 to 1775 are omitted from the majority of history of economics textbooks (Robbins 2000, Medema and

Samuels 2003, Samuels, Biddle and Davis 2003, Landreth and Colander 2002, Roncaglia 2005, Maddison 2007). I argue that the 18th century was a period of exciting economic work; it has just been missed because it did not appear in a forum of discussion that historians of economics have explored. The economic and policy debate from the 1690s to the 1770s took place outside academia. I have tried to illustrate what rich material is available on the 18th century: Periodicals, government papers and submissions to parliament were the vehicles for the economic debate at the time, and they tell a story of empirical economists trying to define and measure the economy.

Under Walpole, the parliamentary government held a consistent definition of the economy, highlighted by Treasury releases and parliamentary debate. This economy was based on the idea that trade circulated domestically, facilitated by credit, which in turn was based on government paper. Therefore the maintenance of the national debt and public trust was at the centre of economic policy making and theory. The political fragmentation after Walpole's resignation led to a country divided and a debate between traditional policy advisors and the emerging scholars. The professional scholar displaced the tradition of empirical economic advice with a more theoretical approach, which was translated by policy makers and advisors like Pulteney (1779) and Pitt (1798). As economic debate re-entered an academic forum, the history of economics tends to pick up the story again, arguing that the 1770s saw the emergence of an economy (Gordon 1991, Schabas 2005, Hoppit 2006). Instead of this, I argue that we have been missing the other side of a debate between scholars and non-academics over who should advise policy makers.

In their disagreement with traditional policy advisors, British scholars avoided reference to non-academic work, which led them to French academics instead. But I have argued that the Physiocrats, whom the British scholars looked to, were not the dominant school of thought in the second half of the 18th century in France as is commonly assumed in the literature (Blaug 1978, Heckscher 1994, Medema and Samuels 2003). By analysing the government administrators of economic policy, the Council of Commerce, I argue that the Physiocrats were dominated by the Council: theoretically, empirically and on policy relevance. The Council defined part of the

economy as unproductive, but agriculture and manufacturing were both productive sectors, unlike the Physiocratic focus on agriculture alone. The Council's intendants set out accounts for the unproductive elements of the economy to estimate how many people needed to be pushed into the productive sectors and to estimate the cost of the unproductive labour to France.

Adam Smith adopted the idea of an unproductive sector, present in both the Council and Physiocratic economy, and applied it to services. Whether that was his intent is disputed (Kennedy 2008), but I present the case that some of his closest students and correspondents, who set out empirical accounts after the *Wealth of Nations* (1776), read Smith in this manner. I propose that the period from 1776 to the marginalist revolution in the 1870s was dominated by a single definition of the economy: Smith's classical economy. This goes part of the way in explaining why classical economists were so obsessed with value theory, when no-one before 1776 or after 1880 focussed on the issue. It is because the classical period was defined by an economy where only some types of labour output had value.

As Studenski (1958) and Tily (2009) show, Marshall (1879, 1890) proposed an economy where all private output had value. This concept dominated British thinking until the 1930s when Keynes argued that it was insufficient for war purposes. In contrast to some of the extensive literature on Keynes which addresses his involvement with national accounting (e.g. Moggridge 1992, Comim 2001), I reconstruct a history, using Keynes's government and personal papers, to argue that Keynes defined the GNP economy with the help of Erwin Rothbarth. Keynes then convinced Stone, Meade and the Treasury to adopt his definition of the economy. This challenges the commonly held idea that Stone and/or Meade invented the GNP economy (Deaton 1993, Vines and Weale 2009), but seems logical when following the available Treasury files and archives which the literature has not used very extensively.

In contradiction to several American authors (Marcuss and Kane 2007, Landefeld et al. 2009) I further argue that the UK idea of GNP was imported to the US, not invented there. Simon Kuznets did not invent GNP – he was its staunchest opponent. I

rely heavily on government archives to construct a story which shows how the administration was divided on the definition of the economy, and that a concerted effort from Richard Gilbert and Keynes led to the basis for introducing GNP to the US. I argue that Richard and Milton Gilbert, with the BEA, then pushed Kuznets out of the American institution responsible for defining and measuring the economy. The new consensus for the US economy was agreed, and supported, by Richard Stone through international collaboration, consensus building, specialist journal articles and academic conferences.

1.2 It matters for historians who has the power to shape policy

I argue throughout my thesis that it matters profoundly for historians of economics, as well as economists today, to understand how theories can inform policy. In the long debate about what defines the economy, the motivation has always revolved around the pursuit of economic policy. From Misselden's and Mun's attempts to address the export collapse and specie crisis in the 1620s, to Richard Gilbert's effort to increase government expenditure in the 1940s, policy seems to have motivated these economists. Porter (1996) argues that politicians have used numbers to make their policy arguments for two centuries. I would extend that and say that since politics became parliamentary in Britain, statistics have played a big part in the policy agenda. Even before then, they influenced the Monarch's policy priorities. The ability to provide empirical evidence relevant to the policy debate has however been the privilege of limited groups. But the influence of individual groups has shifted over time, and this point has escaped the historical treatment of economics, which searches for academic treatises. It is very pertinent to follow these groups who provide empirics and who shape policy decisions if we want to understand why certain policies were pursued.

Up until the 1620s, the valid form of social enquiry was not empirical but relied on traditional rhetoric. In the economic enquiry of early 17th century Britain, the traditional mode of scientific enquiry divided the world between the natural and the artificial, ruled by the deity and the monarch respectively (Tribe 1978, Henry 2008). The 1620s debate between Misselden and Malynes has to be read in the context of this traditional method and a parliament who had been asked by the divine monarch for help. To be part of policy making, they had to write their arguments in traditional

terms, elaborate prose with references to authority and Aristotle, to convince Privy Council members, parliamentary advisors and royal favourites. In the 1630s the traditional mode was challenged and gradually replaced by experimental evidence and empirics in the sciences and social sciences (Poovey 1998, Henry 2008). Thomas Mun's untraditional argument in 1621 was probably ahead of his time, but he was uniquely well placed to provide empirical advice in the 1620s – which he did for the Chancellor of the Exchequer. During the 1640s civil war, no-one could really influence policy directly, and writers appear to be freer in their arguments and criticisms of government institutions (TMA 1645). From here Cromwell took over, and those of a political nature who could get close to him could dictate policy, as William Petty did in Ireland. With the fall of Cromwell and the restoration in 1662, royal favour again became important, but neither Petty nor Mun had much of this, Petty being a Cromwell favourite and Mun being dead.

With the Glorious Revolution of 1688 and the new monarch's promise to allow parliament more power, the world of royal patronage began to change. Economic policy was being made inside Whitehall, first with the monarch's blessing during the 1690s and 1700s, but when Queen Anne fell ill in the 1710s, policy makers needed to convince their fellow parliamentarians and the privileged voters to pass legislation. Davenant contributed the evidence base for that debate, and the civil service, trained by Davenant, played a growing role in producing evidence (Buck 1982). The rise of economic periodicals, mirrored in France (Théré 1998), significantly influenced policy thinking, as exemplified by the two political parties' active sponsorship and authorship of such publications. Between 1700 and 1770 the influential and empirical debates over economics did not take place in academic journals, so we should not look for it there, or in books which only started to carry the debate in the 1740s. This is because, under Walpole (1721-42), economic advice had to come from the Treasury itself, Parliament or periodicals, and until 1770 the scholarly Doctors of Divinity were actively avoided by policy advisors. It was only with the fragmentation of politics after 1742 that full-time scholars began to contribute to the economic policy debate. But only after Pulteney's 1779 work, and Prime Minister Pitt's national account in 1798, did they manage to become the prime policy advisors. The majority of the 18th century was a time for civil servants and parliamentary advisors who were merchants,

industrialists or policy makers to define and measure the economy. Therefore, I argue, it is in their work and correspondence that we need to look for an influential economics debate, part of which I have presented here.

From 1776 national accounts were drawn up by academically inclined social leaders like Colquhoun (1814), and by the middle of the century, national statistical offices were set up to provide official measurements of many things, including the economy (Desrosières 1998). From 1840 onwards new definitions of the economy had to convince the Census Bureau in order to change the official measurement of the economy. Marshall did just that with the help of Flux, Stamp and Bowley in the marginalist revolution. Keynes pulled a similar trick when the Treasury in 1941 moved the official statistical function that measured the economy away from the Census Bureau and into Keynes's sphere of influence in Whitehall. Following the opening of the Census Bureau in the 19th century, it was the academic economists working with government statisticians who were able to redefine the economy.

Keynes was the last academic to redefine the economy single-handedly. Thereafter he and Richard Stone set out to convince the Americans and then the world to adopt their framework. Such adoption happened at the cost of other definitions, like Kuznets's in the USA, and came about through specialist journal articles, international conferences and international agreements made to support the consensus definition of GNP.

So any successful theory of the economy was implemented because the proponents of the theory checked the right administrative boxes and worked hard to push them through the system. Therefore in doing the history of economics I suggest that we should remind ourselves to ask Namier's seminal question in history (1929, 1930): Who is this person? What does he want? How can he get it?

1.3 The importance of empirics since the year 1600

One contribution I hope to have successfully made in this thesis is that the 17th and 18th century economists were every bit as interested in empirical evidence as their 19th and 20th century counterparts, if not more. I disagree with the argument that empirics lived through a golden age with 'political arithmetic' and then "resumed at the end of the eighteenth century, although the British Government had not collected numerical

information in a theoretically informed way for most of that century" (Poovey 1998: 4; see also Gordon 1991, Maddison 2007).

Almost since the introduction of accounting to England in the 1550s (Poovey 1998), empirics, and in particular statistics that explained how the economy was doing, were at the core of economic policy making. The monarchs of the 16th and 17th century kept accounts of their holdings and, according to Wilson (1600: [1972: 754]), even kept accounts for potential lenders to the crown. Throughout the debates over the 1620s crisis, trade statistics were exchanged in parliament with extensive import/export records. If Misselden (1623: 119) is to be believed, this was a practice dating back to the 14th century. William Petty and the political arithmeticians are famous for their interest in empirics (Stone 1997), but it was the continued use of empirics by the civil service under Davenant, and in parliament and public debate throughout the 18th century, which confirms my argument that the economics of the 'mercantilist age' from 1620 to 1775 was empirical. We should treat it as such.

2. What is the economy?

Our current definition of the economy is yet another socially relevant and economically useful method to empirically explain the world around us. By considering GDP growth not just as the definition of economic growth, but as a point in a long list of definitions, a new perspective emerges. The economy is an entity defined by its time. Past definitions have revolved around the ability of populations to earn income, produce output, organise society or fight wars, and our current consensus is no different. With that in mind, we can look at this history, and at our own definition of the economy to evaluate whether GDP is still useful. We can justifiably ask the question: How should the economy be defined? The economy is not a clearly defined sphere around which 'missing' sectors such as the environment, development or housework should be measured in satellite accounts – to mention the most frequent criticisms of omissions from GDP.[2] Rather, the economy is a fluid concept which can be redefined, but that involves replacing GDP with a new definition of the economy.

[2] See Seers's HPI (1972), UNDP's HDI (1990, 1993), Morris's PQLF (1979), or Lan's PPPm (2002) for suggestions of how one could add these factors to GDP. For their critics see Ravaillon (1997) on the HDI, McGillivray (1991) on the HPI, and Sen (1983) or Lall (2002) on entitlements.

The space for the economy emerged when traditional answers were unable to address the 1620s trade crisis, while Petty's work arrived in the aftermath of a civil war. With the public finance revolution in the 1690s and parliamentary selection of the monarch in 1715, domestic trade changed and the British definition of the economy changed with it. The Physiocrats and the Council of Commerce worried that, despite being a larger country, France kept losing wars to Britain, and they sought an explanation in their definition of the economy. Adam Smith, working at the turn of the industrial revolution, convinced his followers that manufacturing was productive and services were not. Marshall's United Kingdom in the 1870s was very different from Smith's Britain of the 1770s, and Smith's classical economy was challenged by an economy where all private sectors activity was productive. This was not what Britain in 1939 required; then, the government needed to know how much industrial war production the government could afford while maintaining subsistence consumption.

Despite my narrative, I am not implying that any of these definitions 'emerged naturally' because of social circumstance, just as the atom bomb did not come about by circumstance when the Americans needed it in 1945. At each point, there were empirical economists who were able to get themselves into the right places and convince the right people to adopt their definition of the economy. The implication is that there is no 'right' or invariant definition of the economy. I would argue that there are more or less appropriate definitions of the economy, applicable at different times. There is a reason why Malynes's 1620s proposal to focus on specie was rejected by Misselden, who focussed on the balance of trade, just as there is a reason why Keynes's GNP was adopted in favour of Clark's and Kuznets's economy in the UK and USA. They were better suited for handling the issues at stake, the crisis in 1620 and war preparation in 1939.

The reason such definitions endure seems to be that they become part of the institutional make-up of a nation. This has become truer over time, with definitions of the economy surviving for longer. There were three main definitions of the economy in Britain for the 200 years that followed 1776, but at least six in the preceding 150 years. In the US and UK, the GNP definition of the economy replaced Kuznets's and

Clark's definitions, which focussed on private consumption and utility. The reason they have not come back is not that they were inherently bad definitions, it was just agreed at the time that, to wage a war, the economy should be defined differently. The "limits to growth" debate in the 1970s included the argument that Kuznets's definition of the economy, which followed the great depression and aimed to measure private consumption, would be a better definition for the modern industrial peace-time economies (Cole 1997: 87). Most recently, French President Sarkozy commissioned a report from Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi to change the way we measure the economy because "I have a belief: We will not change our behaviour unless we change the ways we measure our economic performance" (Sarkozy 2010: vii)

The problem with these attempts to re-think or complement what was GNP and now is GDP is that we are not asking the question which Keynes, Clark and Kuznets asked. Our 21st century debate assumes that the definition of the economy is invariant, and that national accounts have little theoretical content. Like Stiglitz, Sen and Fitoussi (2010), the participants in the "limits to growth" debate need to appreciate that their argument is a challenge to the definition of the economy, not an addition to current indicators. The debaters always start with a variation on the premise that "GDP mainly measures market production" (Stiglitz et al 2010: 11), when in fact GDP defines market production which the accounts then measure. Arthur Young made a crucial observation, several centuries ago (1769: 413), when he set out to estimate the "general wealth" of countries: Namely that "the generality of politicians will consider this article as the test of every other" – we would do well to remember that.

To successfully challenge the definition of the economy and the use of GDP, one has to engage with the national accountants who are responsible for the international System of National Accounts. To do that, you need a domestic statistical office to support a change and eventually political support to support the changes. This history suggests that those who wish to challenge GDP need to identify and engage with the right institutional actors. Hopefully this thesis has shown that the definition of the economy can be challenged, and that the economy has been redefined many times in the past, and if not done right GDP will remain our economy in the foreseeable future.

Bibliographic Notes

I have attempted to make the bibliography as self-contained as possible, with a complete bibliographic reference in each entry, giving the primary source location of material. Throughout the thesis all emphasis in quotes are from the original text unless otherwise indicated.

General in-text notes

Reprints and translations of older material include the original date of publication and in square brackets the year of re-publication and page number in the new edition. So a page reference to Turgot's 1766 *Réflexions* as translated and reprinted by Clark (2003), reads: (Turgot 1766 [2003: pp]). (The Harvard guidelines have no specific advice on reprints and translations, but this method is consistent with Harvard guidelines for dating articles in edited volumes). I have used both originals and re-productions, so if new editions have corrected grammar or spelling, my system indicates clearly when such corrections may have been made. Also, I think it makes it a lot easier to follow the historical narrative, as some collected volumes have multiple papers by a single author, and it avoids confusing citations to authors long after their death.

Correspondence and memoranda from archival sources include the year and date in references. So a memorandum written by Keynes on 25 February 1940 would appear as (Keynes 1940, 25 Feb.) in the text. This makes it easier to follow correspondence and also to identify sources in the bibliography.

Archival sources are abbreviated in the text and refer to the following locations:

KCA	Kings College Archives, Cambridge University: Keynes's Papers.
LAM	LSE Archives, London, File reference MEADE box/folder: page.
NAK	UK National Archives: the papers of John Maynard Keynes.

So a reference to (KCA W/4/17-75) refers to documents 17-75 in folder W/4 in Keynes's Papers at Kings College Archives, Cambridge University. Full details of each archival source are also included in the bibliography.

Details relating to single works

CD is the reference to *Commons Debates 1621* edited by Notestein, et al. (1937) and is a record of the debates in the House of Commons during 1621.

Cobbett (1806-20): Cobbett's Parliamentary History is a verbatim account of the proceedings in the House of Commons as and when available from 1066 to 1803, published in 36 volumes between 1806 and 1820. References are to the year of publication and to the column number, as this book does not have page numbers.

HoC is the in-text reference to the *House of Commons, History and Proceedings*, edited by Chandler (1742) which includes a record of proceedings in the House of Commons. This is an extensive verbatim account of the House of Commons debates, from 1660 to 1739 over 10 volumes, published by the House of Commons, digitized by the History of Parliaments Trust and available on-line. There are no page numbers, only dates, with each text available on-line as detailed in the bibliography. The abbreviation is my own.

JHoC is the in-text reference to the *Journal of the House of Commons* for 1802, which holds the record for the House in 1802. The abbreviation is my own.

Keynes, Collected Writings: Whenever quotations are taken from a letter included in the *Collected Writings of John Maynard Keynes*, it is cited like other letters and then *CW*, the volume and the page number where the text can be found. E.g. a letter from Salant on 12 June 1941, reprinted in volume 23 of the *Collected Writings* on page 186 would be: (Salant 1941, 12 Jun. *CW* 23: 186)

King (1743): This is a re-print of all available *British Merchant* issues published between 1713 and 1721.

Lavoisier (1791b): Quoted and translated in Studenski (1958: 71), from *Oeuvres de Lavoisier, op. cit., VI, pp. 415-416*, but Studenski (1958: 520) does not offer any

further bibliographical detail. This is from the 1893 edition of Lavoisier's collected works, published in Paris.

Petty (1676b): This is a digital copy of Petty (1676 [1691]), digitized by McMaster University (Canada), http://socserv.mcmaster.ca/~econ/ugcm/3ll3/petty/poliarith.html. [on-line, accessed May 2010]. It is a digital copy of the edition "Printed for Robert Clavel at the Peacock, and Hen. Mortlock at the Phoenix in St. Paul's Church-yard"

Smith (1776): References to Adam Smith's *Wealth of Nations* (1776) are taken from the 1981 Liberty Fund reprint of the 1976 Oxford Edition of the *Wealth of Nations*. The in-text references include the book, chapter and paragraph number as is usual. E.g. a reference to Book 4, Chapter 9, and paragraph 10 would be: (Smith 1776: IV, ix: 10).

Smith, Correspondence: Quotations and letters from Mossner and Ross's (1987) *Correspondence of Adam Smith* are dated like other letters, plus a square bracket which includes the year of republication (1987) and an italic numeral. The numeral indicates the number associated with a given letter, used by all collections of Smith's correspondence. E.g. a letter from Hume on 1 April 1776, which is letter number 150, would be: (Hume 1776, 1 Apr [1987: *150*]).

Turgot (1766): Turgot's *Réflexions* is divided into numbered sections, and the reprint has its own page numbers. I include the paragraph numbers in the reference as they apply to all editions of *Réflexions*, and a square bracket with the year and page reference for the reprint. E.g. Paragraph 39 which is reprinted on page 526 in Clark (2003) would be: (Turgot 1766: 39 [2003: 526]).

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